FILE COPY

BACTERIOLOGICAL NEWS

American Society for Microbiology

OFFICE OF THE EXECUTIVE SECRETARY

19875 MACK AVE. DETROIT 36, MICH.

VOLUME 27 | *April, 1961* | NUMBER 2

OFFICERS AND COUNCILORS

President: H. R. COX, Lederle Laboratories, Pearl River, N. Y.
Vice-President: JOHN E. BLAIR, Hospital for Joint Diseases, New York, N. Y.
Secretary: E. M. FOSTER, University of Wisconsin, Madison, Wis.
Treasurer: J. H. BAILEY, Sterling-Winthrop Research Institute, Rensselaer, N. Y.
Executive Secretary: R. W. SARBER, 19875 Mack Avenue, Detroit 36, Michigan
Councilors-at-Large: B. D. DAVIS, Harvard University, Boston, Mass.
C. W. EMMONS, National Institutes of Health, Bethesda, Md.
R. D. HOUSEWRIGHT, Fort Detrick, Frederick, Md.
M. F. SHAFFER, Tulane University, New Orleans, La.

Councilors Elected by Local Branches:

E. H. Ludwig, University Park, Pennsylvania ..... *Allegheny*
R. E Hungate, Davis, California ..... *Northern California-Hawaii*
H. M. Kurtz, Los Angeles, California ..... *Southern California*
S. M. Morrison, Fort Collins, Colorado ..... *Colorado-New Mexico-Wyoming*
R. C. Cleverdon, Storrs, Connecticut ..... *Connecticut Valley*
M. M. Sigel, Coral Gables, Florida ..... *South Florida*
C. J. Rickher, Chicago, Illinois ..... *Illinois*
E. D. Weinberg, Bloomington, Indiana ..... *Indiana*
J. V. Beck, Provo, Utah ..... *Intermountain*
Emil Kotcher, Louisville, Kentucky ..... *Kentucky-Tennessee*
D. E. Shay, Baltimore, Maryland ..... *Maryland*
C. W. Christensen, Detroit, Michigan ..... *Michigan*
F. B. Engley, Jr., Columbia, Missouri ..... *Eastern Missouri*
David Paretsky, Lawrence, Kansas ..... *Missouri Valley*
Werner Braun, New Brunswick, New Jersey ..... *New Jersey*
D. G. Lundgren, Syracuse, New York ..... *Central New York*
W. D. Bellamy, Schenectady, New York ..... *Eastern New York*
P. C. Eisman, Summit, New Jersey ..... *New York City*
J. O. Thayer, Chapel Hill, North Carolina ..... *North Carolina*
G. M. Needham, Rochester, Minnesota ..... *North Central*
H. E. Lind, Brookline, Massachusetts ..... *Northeast*
R. H. McBee, Bozeman, Montana ..... *Northwest*
H. E. Swim, Cleveland, Ohio ..... *Ohio*
C. F. Clancy, Philadelphia, Pennsylvania ..... *Eastern Pennsylvania*
Americo Pomales-Lebron, San Juan, Puerto Rico ..... *Puerto Rico*
G. A. Costa, Rio de Janeiro, Brazil ..... *Rio de Janeiro*
W. A. Pierce, Jr., New Orleans, Louisiana ..... *South Central*
Margaret Green, University, Alabama ..... *Southeastern*
E. B. M. Cook, Austin, Texas ..... *Texas*
H. J. Welshimer, Richmond, Virginia ..... *Virginia*
W. L. Sulzbacher, Beltsville, Maryland ..... *Washington, D. C.*

Council Policy Committee:

H. R. Cox, *Chairman* E. M. Foster, *Secretary*
C. A. Evans J. H. Bailey J. R. Porter John E. Blair
C. F. Niven, Jr. (1961) Orville Wyss (1962) Werner Braun (1963)

Ex officio Members

J. R. Porter, Editor-in-Chief, JOURNAL OF BACTERIOLOGY; H. W. Scherp, Editor-in-Chief, BACTERIOLOGICAL REVIEWS; H. B. Woodruff, Editor-in-Chief, APPLIED MICROBIOLOGY; M. W. Chase, Chairman of the Program Committee; R. E. Kallio, Vice-Chairman of the Program Committee; L. R. Frederick, Chairman of the Division of Agricultural and Industrial Bacteriology; H. O. Halvorson, Chairman of the Division of Bacterial Physiology; L. L. Campbell, Chairman of the Division of General Bacteriology; W. F. Verwey, Chairman of the Division of Medical Bacteriology and Immunology; R. W. Schlesinger, Chairman of the Division of Virology.

SOCIETY AFFAIRS

LATE INFORMATION ON THE CHICAGO MEETING

APRIL 23 THROUGH APRIL 27

The 61st Annual Meeting represents the programming of original papers and sessions to an extent not previously utilized. Once again, we return to the use of a single hotel, which has undergone much alteration since 1958 and is capable of handling this large meeting. To accommodate projection facilities in Sessions Rooms on the lower-ceilinged third floor, the management is kindly providing "trans-lux" screens with projection from the rear.

Of the 73 Sessions planned, some 54 are devoted to the presentation of 544 original papers, an increase of 56 over those presented in Philadelphia. Two other Sessions will constitute the concluding part of the program of the Symposium on Marine Microbiology, and Symposia are being presented in six Sessions. In addition, there will be showings of motion pictures and 10 special Sessions. Another 7 Round Tables are carried in the *Program*, which should reach the membership very shortly.

Attention is called to the fact that the registration fee includes attendance at the Symposium on Marine Microbiology, to be held in the same hotel on the preceding Thursday through Saturday, April 20–22. Consult the *Program* of the 61st Annual Meeting for details.

The newly created Division of Virology is off to a flying start. No less than 82 papers are scheduled for presentation in 8 Sessions, an increase of 46 per cent over 1960.

In planning for the necessarily increased number of concurrent Sessions, the Program Committee decided to dispense with the familiar but already inadequate "posting boards" in Sessions rooms that were used to show the delivery of particular papers in other areas. Instead, hour "time markers" are printed in the *Program*, such that one will know the particular 15 minutes in which a given paper is scheduled for delivery and discussion. Four papers are scheduled for each hour. Within each room, the particular paper currently being delivered there will be posted on the blackboard for the information of persons entering the room. By this means, no difficulty should be encountered in going to audit particular papers when Conveners observe the printed schedule.

Two Symposia are scheduled for daytime delivery this year on an experimental basis, and four Symposia for the usual evening meetings. In turn, three sessions of original papers have been scheduled for evening presentation. The decisions regarding the daytime Symposia were made by the Program Committee in response to requests by members. The reaction of persons is earnestly solicited, provided that comments are put in writing.

Room Reservations

If your reservation for rooms is not made already, you should act at once. Use the room reservation form that was enclosed with the January issue of *Bacteriological News*, or secure one from Raymond W. Sarber, Executive Secretary, 19875 Mack Avenue, Detroit 36, Michigan.

For Early Registrants

On Sunday afternoon at 3:00 p.m., April 23, there will be a special showing of four 30-minute teaching films on microbiology. These have been prepared by the American Institute of Biological Sciences and are presented by the Committee on Education of the S.A.B.

Early Registration

To serve those attending the Symposium on Marine Microbiology, the registration desk will be open on Wednesday, April 19, from 1 to 6 p.m., and from 8 a.m. to 5 p.m. on Thursday and Friday.

Regular S.A.B. (A.S.M.) Registration will commence on Saturday, April 22, between 2 and 8 p.m. and on Sunday, April 23, from 10 a.m. to 7 p.m.

Free registration is extended only to persons especially invited. It does **not** apply to persons who are members of the Society or to persons who are offering Scientific Exhibits. If you are entitled to free registration, please present your letter of invitation.

If your are entitled to Graduate Student rates, please present the required letter from your major professor.

New CPC and Council Schedules

The **Council of the Society** is reminded that the Council Policy Committee will meet this year on Saturday, April 22, and that the full Council will meet on Sunday at 9:00 a.m. and again in the afternoon. The procedure will allow much necessary business to be handled before the start of the sessions, and should free the officers and councilors to attend various events according to their choice.

Senez to be O.N.R. Lecturer

The General Bacteriology Division is pleased to announce that Dr. Jacques C. Senez, from the Centre National de la Recherche Scientifique, Marseilles, France will serve as honorary convener of the symposium arranged by Dr. Howard Gest, on the "Metabolism of Inorganic Compounds." Dr. Senez will be right at home in this role, having been actively engaged in research on nitrogen fixation, nitrite metabolism, hydrogen metabolism and sulfate reduction. Dr. Senez will also deliver the O.N.R. lecture entitled "Some Considerations on the Energetics of Bacterial Growth" under the joint sponsorship of the Office of Naval Research and the American Society for Microbiology.

Special Events

On Monday, April 24, the Presidents and Secretaries of local branches will meet for cocktails, dinner and their business meeting. Cocktails will be served from 5:00 p.m. to 6:00 p.m.

The Local Committee is sponsoring a graduate student mixer to be held on Monday afternoon, April 24. Refreshments will be served and a band will supply dance music. The party will be open only to properly identified graduate students.

Special Tours

The Chicago Grayline, Inc. will have a representative on duty in the registration area on Saturday, April 22, and Sunday morning April 23, for the purpose of selling Chicago sight-seeing tours to interested persons. A specially arranged tour is planned for Sunday afternoon, April 23, extending from 1:30 to 4:30 p.m. This tour will include a visit to the Art Museum, The Museum of Science and Industry, the world famous South Shore Filtration Plant, the University of Chicago Campus, and several other points of interest. This tour is being organized particularly for the benefit of visitors from foreign countries, although many native Americans might be interested in participating. The cost will be $2.75 per person.

A tour through the internationally famous Argonne Laboratories is scheduled for Tuesday, April 25. Only 78 persons can be accommodated on this tour, as it is restricted by Argonne officials. Round trip bus transportation will be $2.50. Persons making the tour will be free to purchase a lunch of their choice at the Argonne cafeteria. Buses will leave the Clark Street entrance of the Morrison Hotel at 9:00 a.m. sharp and will return at 5:00 p.m.

Armour Institute of Technology is sponsoring two complimentary tours on Wednesday, April 26. 15 persons can be accommodated on each tour, one of which will be in the morning and the other in the afternoon.

The Local Committee is sponsoring two additional tours on Wednesday, April 26, one in the morning and one in the afternoon, through the new Presbyterian-St. Luke's Hospital and Research Laboratories. The Research Laboratories in this institution are probably the most modern in the medical world. One hundred persons can be accommodated on these tours, fifty in the morning and fifty in the afternoon.

The Feminine Touch

The Chicago Suite (505) will be readied for the opening "Coffee And" on Monday morning, April 24, at 10:00 a.m. The Hostess Committee has concluded arrangements for an interesting and varied program for visiting wives and members attending the Convention.

"Musts" on the program include a Tea at Marshall Field and Company, which will feature famous dramatist, Miss Jerri Schmal, who will present Kathleen Mellen's "Hawaii Becomes American." Attired in a Holoku, Miss Schmal vividly portrays the romantic story of Hawaii's ancient Kings and Queens and the early colorful turbulent times of our 50th state.

The tour of the Avon Cosmetic Company followed by shopping and "Dutch Treat Lunch" at Old Orchard—one of Chicagoland's most lovely shopping centers, will set the stage for the final planned activity, which is a luncheon at Chicago's famous Kungsholm Restaurant—home of the world famous Kungsholm puppet opera.

Since reservations must be made in advance for the above mentioned affairs, it will be appreciated if visiting wives and lady members will purchase tickets at the time of registration. Members of the Hostess Committee are looking forward to seeing you again and are prepared to help with any of your plans. Let us make your 1961 visit to Chicago a memorable one.

Special Meals

The complete announcement of special meals will be included in the registration packet which you will receive at the time you pick up your badge. This packet will also contain other pertinent and interesting literature regarding Chicago at large and of the Convention in particular.

Utilize the *Incubator*

Since this convention will have more papers presented and more concurrent sessions than in previous S.A.B. conventions, it is entirely possible that last minute changes may have to be effected. The Local Committee will, therefore, publish the *Incubator* each day starting Saturday, April 22. The complete listing of daily food functions as well as round table sessions, which have not been listed in the official program, will be presented. Any person wishing to have material published in

the *Incubator* is requested to leave copy at the Information Desk by 6:00 p.m. preceding publication.

Round Tables Programs

Among the Round Tables, note should be taken of the following: Taxonomic problems will be considered for **Enterobacteriaceae** (William H. Ewing), **Actinomycetes** (David Gottlieb), **Pseudomonas** (Rudolph Hugh), and **Enteric Viruses** (G. D. Hsiung). The **American Type Culture Collection** will discuss problems with persons maintaining culture collections, Monday, April 24, at 3:00 P.M. **Aquatic Microbiology** (Norman C. Dondero) will hold a special meeting on Tuesday afternoon, April 25. The **Soils Microbiology Section** under Dr. H. Katznelson will meet on Wednesday morning, April 26, for a special session on "Recent Developments in Nitrogen Fixation," J. C. Burton, *Convener*. **Analytical Microbiology** (Lawrence J. Dennin) is scheduled for sessions on Tuesday morning, Tuesday afternoon, and Thursday morning. Other Round Tables consider *Clostridium perfringens* food poisoning (Howard E. Noyes), **Listeria infections** (M. L. Gray), **Yeasts** (L. R. Hedrick), **Current Trends in Teaching Microbial Physiology** (S. G. Knight), and the **Evaluation of Methods for Bacteriophage Typing of Staphylococci** (Elaine L. Updyke). A special session on **Microbiology in Introductory Biology** has been arranged by the Committee on Education (L. S. McClung).

Placement Committee

The Placement Committee will be located in Rooms 427, 429 and 432 on the Fourth Floor of the Hotel under the direction of the Executive Secretary. Miss Mildred Schwartznau of the Headquarters Staff, and members of the Placement Committee will be available to assist registrants and employers. Office hours will be from 9:00 a.m. to noon and from 1:30 p.m. to 4:30 p.m. Monday through Thursday, April 24 to 27.

Bacteriologists interested in employment opportunities are urged to register with the Placement Committee in advance of the meeting so that their records will be immediately available to employers. For this purpose write Placement Committee, American Society for Microbiology, 19875 Mack Avenue, Detroit 36, Michigan.

All applicants who attend the meeting should register with the Placement Committee early Monday, April 24, to receive information about scheduling of interviews. Descriptions of available positions will be posted for the use of registrants.

Employers are also urged to register available positions with the Placement Committee in advance of the meeting and to provide a description of each position, candidate requirements, salary range, location of position, and the names of supervisors who will be available at the meeting to interview registrants. Available fellowships, grants, assistantships, summer positions, etc. can also be registered by employers.

Employers who desire bacteriologists for their staff vacancies are invited to inspect the personal data of applicants and arrange for interviews. The Placement Committee will arrange for interviews at mutually convenient times. Facilities will be available for interviews.

SECRETARY'S REPORT

When the time comes to review the past year's activities of the Society the Secretary is bound to ask himself, "Is this trip necessary?" Most of the events already have been announced, and the others will be described in time. Is a special report worth while?

No one, least of all your current Secretary, can answer that question with confidence. But it seems to be traditional for the Secretary to prepare an accounting of the scattered happenings of the year before. So let's take a look at the highlights of 1960.

Almost the last day of the year brought an event that may, in time, prove to be the most important act of all. On December 27, 1960, the Society of American Bacteriologists went out of existence to be replaced by the American Society for Microbiology. The old familiar S.A.B. is now the A.S.M. It will take quite a while for some of us to become accustomed to the new name, but we'll manage. In the meantime let us hope that the change will bring all the benefits predicted by its proponents. A clear majority of the members wanted the new name. They got it by orderly process of the ballot. Democracy prevailed.

Last year showed the results of a noble experiment that was designed—unfortunately without controls—in 1959. For the first time in the Society's history members were allowed an option in the journals they received. Opponents of this scheme feared a serious loss of subscribers by the *Journal of Bacteriology*, with a resultant financial crisis. Proponents thought it would please a sizeable segment of the membership and might even be an attraction to new members. We tried it.

By the end of 1960 the number of subscribers to *Applied Microbiology* had almost doubled, going from 2,275 to more than 3,800. The *Journal of Bacteriology* had only about 100 fewer subscribers than the year before. Thus one of our journals that lost money in 1958 and 1959 was made healthy again without significant harm to the other. And we like to hope that several hundred members were made happier in the process. Certainly it is too early to pass final judgement, but up to now it appears the operation was a success.

It should be emphasized, of course, that circulation of the *Journal* was maintained near the

previous level only because of the gratifying continued growth of the Society in 1960. Thanks to the splendid efforts of the Membership Committee, many of our local branches, and a host of individual members, the Society admitted 778 new regular members in 1960 and showed a net gain of 558 over 1959. Thus the total paid regular membership for the year was an all-time high of 6,350. Similarly the number of sustaining members rose from 92 to 110, another all-time high. The total number of members in all categories—regular, sustaining, student, emeritus, etc.—reached 6,659 for the year.

From these figures it would appear that the changes in our membership requirements had little effect on the Society's growth. Institution of the requirement for a bachelor's degree, or its equivalent in training and experience, apparently had little influence on the number of new members. Similarly, the establishment of a special membership for students resulted in the enrollment of only 58 in this category.

A larger membership naturally is gratifying to those of us who serve the Society. Anyone who is striving to further the science of bacteriology appreciates the support of as many people as possible, and a large membership broadens the financial support of the Society's activities. But our continued growth is a mixed blessing, because additional members aggravate certain problems of our Annual Meetings and our publications.

Our 1960 Annual Meeting had the largest attendance in history (3,675), the largest number of abstracts submitted (535), and the largest number of papers presented (488). By heroic efforts the Program Committee and the Local Committee were able to arrange space for this record number of papers. Doubtless much of this interest is traceable to our increasing membership. But there are reasons to believe that some of it stems from the unique opportunity offered by our Annual Meetings for people with common interests to assemble in small groups. The policy established several years ago to encourage the so-called "Round Table" has brought forth numerous interest groups, many of which have developed into established organizations within the Society's structure. At the 1960 meeting, for example, there were at least a dozen round table meetings on a wide variety of subjects. Quite likely, it would seem, these sessions help draw people to our Annual Meetings where they can find others with similar interests. More people at the meetings means more papers to be given, which means more scheduling problems for the Program Committee. The 1961 meeting, for example, attracted over 650 abstracts, 100 more than in 1960. But is this bad? One of our objectives is to disseminate information about bacteriology. Somehow we must continue to try to accommodate on our programs those papers that contain useful new information.

Our 1960 meeting saw the birth of a new Division of Virology in the Society. This division has made a fine start in planning for the 1961 meeting. Its programs should attract many virologists to participate in Society affiairs.

Last year brought a decision, finally, to relieve the pressure for space in our serial publications. Since 1953 there has been no increase in the size of our journals. In the meantime, of course, the volume of research has increased and the pressure for space has grown steadily more acute. From time to time, as funds permitted, the publisher has generously agreed to print extra pages, but finally it became evident that something more substantial had to be done. Therefore arrangements were made, effective in 1961, to enlarge both the *Journal of Bacteriology* and *Applied Microbiology* by about one-third.

A greater number of papers naturally means more work for the editors. The foregoing increase in volume merely aggravates a situation that is already bad; that is, our scientific editors have to spend more and more time on the mechanical details of processing manuscripts. Recognizing the necessity to relieve our editors of as much work as possible, while still benefiting from their scientific talents, the Council at Philadelphia voted to establish an editorial office under the direction of a managing editor. This office will take over accepted manuscripts and see them through publication. Also it will help in the preparation of our special publications, such as the *Program* and *Proceedings* of our Annual Meeting.

Financing both the journal expansion and the editorial office obviously will require a considerable sum of money. After extended discussion at the Annual Meeting a plan was designed and approved for meeting the cost without undue burden to anyone. Slight increases in dues, nonmember subscription rates, advertising rates and the price of reprints will provide most of the money needed. In addition, authors with research grants or other appropriate funds will be asked to pay a small fraction of the cost of publishing their papers. It is hoped that these sources of funds will be adequate to support our publications for several years to come. In the meantime, the National Science Foundation was asked for a grant to be used to publish a major part of the backlog of papers already accepted by our journals and thus reduce the delay in publication that now exists.

During 1960 the proceedings of the 1959 Fort Detrick Symposium on Nonspecific Resistance to Infection appeared in *Bacteriological Reviews* as a bonus to all subscribers. Plans were made in 1960 for the publication of two other symposia in future issues of the *Reviews*. The bulk of the cost of these enlarged issues is borne by outside agencies

and the material reaches the subscribers at no extra cost. Even one who looks on Society membership merely as an attractive way to secure the publications must admit his dues are well spent. In 1960 the member who chose the *Journal of Bacteriology* received over 2,600 pages of printed matter for his $12.00 dues.

The educational activities of the Society continued at a fast pace in 1960. Aimed mostly at interesting youngsters in bacteriology as a science and telling them about bacteriology as a career, the program of the Committee on Education took several forms. The teaching aids lists prepared by the committee in 1959 to assist high school biology teachers were published with additional material as a special issue of the *American Biology Teacher*. This issue was devoted exclusively to microbiology and was mailed to the 5,600 members of the National Association of Biology Teachers. In all, over 10,000 copies of the special issue were distributed free to science teachers and other interested individuals. The response has been extremely favorable and a second printing of 10,000 copies has been prepared and distributed. Difco Laboratories has supported the entire cost of printing and distributing this important booklet.

The issuance of citations and letters of commendation to prize winners at science fairs was continued last year. Also, for the first time the Society offered two cash awards ($125.00 and $75.00) for the best microbiology exhibits at the National Science Fair—International. The Council agree to offer these awards again in 1961.

The booklet "A Career in Bacteriology" continues in demand. Nearly 50,000 copies have been distributed since the first printing in 1953. Last year the National Science Foundation gave the Society almost $10,000 to be used for preparing a revision of the booklet and distributing 30,000 copies to science teachers. This revision should be available within the next few months.

Finally, the activities of the local branches in career promotion and counseling should not be overlooked. Many of our branches have career or education committees that are doing highly effective work at the "grass roots" level.

A new program patterned on the British system and aimed at improving the quality of instruction in microbiology was undertaken during the latter part of 1960. Under this program the Society will publish notices in the *Journal of Bacteriology* of academic vacancies in college and university departments of microbiology. The purpose is to bring the vacancies to the attention of as many people as possible, hoping thereby to secure the best qualified individuals for teaching positions. By establishing salary minima for acceptable notices it is hoped also to improve the financial position of microbiology teachers.

The Society's placement service continued to serve a worthwhile function. Although fees were increased slightly to make the service self-supporting, the number of registrants and the number of placements were higher in 1960 than ever before.

Late in 1960 a group of individuals interested in antimicrobial agents and chemotherapy asked the Society to sponsor an annual conference that would bring together all—microbiologists, chemists, biochemists, clinicians, pharmacologists, and others—who are interested in the treatment of infectious diseases. After thorough consideration the Council Policy Committee approved the request and the first meeting is being planned for New York City next October 31, November 1, 2. The Society will sponsor publication of the proceedings of the conferences.

The foregoing list obviously does not cover all the 1960 activities of the Society, but it should convey the impression that we are busily driving forward. The activities of most of our committees are deliberately omitted because their reports will appear in the August issue of *Bacteriological News*. It should not escape notice, however, that we are taking on projects now that would have been very difficult, if possible at all, only a few years ago. Contributing in no small way to the success of our operations in 1960 has been the staff of our headquarters office. Finally we have a mechanism to get things done. This, in itself, should provide as much satisfaction to the members as it does to the officers and councilors.

Though 1960 was a successful year for the Society by any measure, we still have plenty of room for improvement. You can help by making suggestions to your councilor or to one of the officers. You can also help by inviting your nonmember colleagues to join the Society.

E. M. FOSTER
Secretary

JOURNAL OF BACTERIOLOGY

Annual Report for 1960

Two members (Hilary Koprowski and O. B. Weeks) of the Editorial Board completed their terms in 1960. On behalf of the Society I wish to thank these men for their help.

The first tabulation shows the distribution of manuscripts and other data on papers published during the past years. Fewer (4) manuscripts were received in 1960 than in 1959, but 10 more articles were published. The backlog of manuscripts awaiting publication was reduced from 152 to 119 during the year.

Because many authors fail to write clearly and concisely (or manuscripts are not in proper form), one-third of the papers were returned for modifica-

tion. Approximately 35% of the manuscripts submitted in 1960 were rejected. This corresponds to 25% in 1959.

The second tabulation shows the income and expenditures in the Editorial Office for the past two years.

During the past ten years I have had the honor and pleasure of being Editor of the *Journal*. I wish to take this opportunity to thank members of the Editorial Board, and the Officers of the Society for their kindness and help during this period.

Professor W. B. Sarles, Department of Bacteriology, University of Wisconsin, will become Editor of the *Journal* 1 July 1961. Professor Sarles will be an excellent editor. I hope all members will continue to cooperate and support the Society's publications.

	1959	*1960*
Number of manuscripts held over and under consideration January 1	68	55
Number of manuscripts received during year	439	435
Number of manuscripts accepted during year	326*	282‖
Number of manuscripts returned to authors for correction or modification	124	143
Number of manuscripts rejected during year	111†	151¶
Number of articles published during year	297‡	307**
Number of illustrations:		
Tables	744	803
Linecuts	443	576
Halftones	199	159
Number of manuscripts accepted and awaiting publication	152	119
Number of manuscripts under consideration December 31	55§	77††

* Includes 41 originally submitted in 1958.

† Includes 18 originally submitted in 1958; 1 transferred to another journal; 2 withdrawn by authors; 11 returned to authors for modification and not resubmitted.

‡ 1699 pages, excluding indexes.

§ Comprises 29 in hands of reviewers; 13 in hands of authors for modification; 13 in editorial office.

‖ Includes 43 originally submitted in 1959.

¶ Includes 12 originally submitted in 1959; 4 transferred to other journals; 2 withdrawn by authors; 33 returned for modification and not resubmitted by authors.

** 1766 pages excluding indexes.

†† Comprises 36 in hands of reviewers; 17 in hands of authors for modification; 24 in editorial office.

	1959	*1960*
Income:		
Balance on hand January 1	$863.95	$417.17
Received from the Williams & Wilkins Company	5,000.00	5,500.00
Total	$5,863.95	$5,917.17
Expenditures:		
Editorial Assistant, Social Security, Group Insurance, etc.	$4,197.60	$4,671.84
Postage, Binding of Journals, Office Supplies, etc.	1,249.18	1,004.31
Total	$5,446.78	$5,676.15
Balance on hand December 31	$417.17	$241.02

J. R. PORTER, *Editor*

BACTERIOLOGICAL REVIEWS

Annual Report 1960

A notable event of 1960 for *Bacteriological Reviews* was the publication in the March number of 16 papers based on, and in many cases representing a considerable elaboration of, talks presented the the "Symposium on Nonspecific Resistance to Infection," sponsored by the U. S. Army Chemical Corps, Fort Detrick, Maryland, 16–17 September 1959. Encouraged in large measure by the enthusiastic response accorded this special issue, three other sponsors have opened negotiations with the Editor for analogous issues. Evidently here is an important need and opportunity. Though perhaps not conforming to the criteria of a "classical review" (about which the Editor hears regularly but the exact nature of which has never been clearly defined to him), such accounts do fulfill our stated purpose "to provide authoritative, critical surveys on the current status of subjects and problems in the diverse fields of microbiology." As a periodical with perhaps the largest and most widespread circulation of any biological journal, *Bacteriological Reviews* can ensure prompt access at minimal unit cost to practically all microbiologists and those with cognate interests everywhere. Moreover, the ubiquitous distribution of *Bacteriological Reviews* in libraries ensures the continued availability of these critical appraisals of still rapidly developing phases of our discipline to students, who unquestionably will be forced to resort increasingly to compendia, lest they founder in the tidal wave of research papers that mounts ever higher.

With such views in mind, an energetic effort was made, with regrettably scant response from conveners and participants, to secure reviews based on symposia presented at the 1960 Annual Meeting. Since verbal presentation is a notoriously

inefficient way to communicate information (let alone record it!) and since only a very minor fraction of microbiologists can possibly attend, these occasions surely entail egregious waste. Fortunately, the prospects for publications of high quality from the 1961 symposia are very encouraging.

In all, 29 reviews of 14 pages average length (range, 5 to 31 pages) were published in 1960.

After some eight years of highly competent service as an Associate Editor with two Editors, Jack J. R. Campbell asked to be relieved. The Editorial Board was subsequently enlarged by the appointments of James A. Baker, Harlyn O. Halvorson, Wallace P. Rowe, and Orville Wyss.

Financial Statement

Receipts:		
Cash balance forwarded 1 January 1960	$150.66	
Postage on hand 1 January 1960	12.58	
Received from the Williams & Wilkins Company	600.00	$763.24
Expenditures:		
Secretarial assistance	$440.00	
Annual meeting travel	99.30	
Postage	55.73	
Miscellaneous	12.53	$607.56
Postage on hand 31 December 1960	5.13	
Cash balance, 31 December 1960	150.55	$763.24

HENRY W. SCHERP, *Editor*

APPLIED MICROBIOLOGY

Annual Report 1960

In 1960, Volume 8 of *Applied Microbiology* was published. As in former years, the reports of research on the applied aspects of microbiology covered a wide range of topics. In addition, reviews of subjects of broad interest were published as Microbiological Process Reports or Microbiological Process Discussions. A classification of papers published by subject matter is given below.

Subject	*Papers Published in 1960*
Microbiology of food products	19
Methods and techniques	11
Microbial physiology related to applied processes	11
Fermentation and bioengineering	9
Antibiotics	5
Germicides and disinfectants	5
Microbiology of industrial products (nonfermentation)	5
Marine microbiology	4
Microbiology of water and sanitation processes	4
Soil microbiology	4
Culture identification and preservation	2
Rumen microbiology	2
Deterioration and preservation	1

The twenty-five members of the Editorial Board have been of great help to the editor in evaluating manuscripts and have spent much time in making specific suggestions for improvements in some manuscripts. In addition, specialists not included on the Board have given valuable assistance in judging certain papers. The members of the editor's staff, Dr. B. M. Miller, Mrs. Mary Ann Eccles, and Miss Matilda Heisch, have contributed greatly to the quality of the journal.

Through our system of rotation, five of the members of the Editorial Board retired from service on *Applied Microbiology* with the completion of Volume 8. These are Dr. A. C. Blackwood, Dr. J. H. Brewer, Dr. E. R. L. Gaughran, Dr. F. S. Orcutt, and Dr. E. L. Schmidt. New members have been selected for the Board to maintain approximately equivalent representation from university, industrial, and government or institutional laboratories. Experts in various fields of microbiology have been included on the Board, based on areas covered by papers previously published in the journal. The new members appointed to the Editorial Board for 1961–1965 are Miss Marjorie A. Darken, Dr. T. C. Grubb, Dr. H. Katznelson, Dr. D. Paretsky, and Dr. W. A. Zygmunt.

The following tabulation shows the number of papers received prior to December 31, 1960, their disposition, and a comparison with similar data for 1959.

	1959	*1960*
Number of manuscripts received for publication during year	122	144
Number of manuscripts accepted	86	107
Number of manuscripts rejected	17	32
Number of manuscripts withdrawn	1	—
Number of manuscripts under consideration	23	28
Number of manuscripts returned to authors for correction or modification	23	23
Number of papers published	81	82
Backlog of accepted paper awaiting publication	46	71
Pages printed	402	396

The following tabulation shows the expenditures of the editorial office during 1960.

Income:		
Balance on hand January 1, 1960	$1,065.38	
Received from Williams & & Wilkins	500.00	
Interest	72.25	
Total		$1,637.63
Expenditures:		
Secretarial and editorial assistants	75.00	
Postage, office supplies, etc.	130.00	
Travel to official meetings	81.47	
Total		286.47
Balance on hand December 31, 1960		1,351.16

H. B. WOODRUFF, *Editor*

REPORT ON MEMBERSHIP

In the April 1960 *Bacteriological News*, a steady growth in Society membership was reported. This increase in the number of active members has continued through 1960. Through the tireless efforts of the Membership Committee and the individual members of the Society this expansion has been realized. With a total of 310 new members for 1961, as of the moment, the prospects for a still better year certainly look promising. However, if we are to continue growing, the fullest cooperation of **all** the Society's members must be extended through 1961.

The chart below presents a comparison of the growth of the various types of membership from 1958 through 1960.

	1958	1959	1960
Active members (total)	5318	5862	6365
New	551	727	778
% of members new	10.4	14	13.3
Non-renewal rate*	5.3	3	4.7
Sustaining members†	78	92	110
Corresponding members	7	7	7
Retired members	9	7	7
Emeritus members	85	99	104
Honorary members	1	3	5
Student members	—	—	58
Grand total	5497	6070	6656

* Per cent of members for preceding year that did not renew for year shown.

† Total sustaining members renewed for 1961 on February 15—99.

The number of sustaining members in 1960 was 110—an increase over 1959, when only 92 were listed on our rolls. Thus far in 1961 we have welcomed 2 new sustaining members—Cappel Laboratories and Hartman-Leddon, Inc. There are still many more companies that distribute microbiological materials whose names do not appear with those listed in the front of the *Journal of Bacteriology* and our other journals. They could derive great benefits by becoming members of the Society. All that many of these companies need is a personal invitation from **you** directed to a responsible individual within the company. Or if you prefer, send the name of the individual to be contacted to the Chairman of the Membership Committee who will make the necessary contacts. Sustaining member brochures are available from the business office, the Secretary, or the members of the Membership Committee. The brochure lists the advantages of membership in the Society and contains an application blank. It supplies the necessary information to an applicant. All that is required of you is to see that it reaches the hands of a prospective member. By doing this you are helping the Society to grow and as a result make possible greater benefits to you as a member. The Society will appreciate your efforts and the job of the Membership Committee will be made easier.

A membership booth will again be set up in the registration area at the Annual Meeting in Chicago for the convenience of those who would like to join the Society. Why not have your non-member friends join us? Why don't **you** stop by the booth and pick up several new membership brochures and see that your non-member microbiologist friends obtain copies?

Finally, I would like to make a request of all department heads in order that graduate students may recieve the special rates at the Annual Meeting: Please include the names of all the graduate students in your department when you submit your certified list of graduate students to the Registration Chairman of the Annual Meeting. The lists of names which you submit are of great value to the Membership Committee, for it is from these lists that it secures the names of future Society members.

DONALD E. SHAY, *Chairman*
Membership Committee

SOCIETY TO SPONSOR ANNUAL CONFERENCE ON ANTIMICROBIAL AGENTS AND CHEMOTHERAPY

At its meeting in December, 1960, the Council Policy Committee approved a proposal that the Society sponsor an annual "Interscience Conference on Antimicrobial Agents and Chemotherapy." The proposal was transmitted by a committee of 18 men who represented a much larger group that met in Washington last October.

The conferences will be held in the fall of the year separate from our Annual Meeting. The first conference in the series is scheduled for the Hotel Commodore in New York City, October 31, November 1, 2, 1961. It is anticipated that future meetings will be held in other cities.

The goal of the conference is to bring together individuals who are interested in all phases of chemical treatment of disease including the nature and action of antimicrobial agents whether of biological origin or synthetic. Thus it is hoped to have a true "interscience" exchange between microbiologists, chemists, biochemists, clinicians, pharmacologists, pathologists, and members of related disciplines.

The program of the first conference is being planned initially by a committee of George M. Savage, Chairman, J. C. Sylvester, and Maxwell Finland. The committee will be enlarged as planning develops. Arrangements for registration, meeting rooms, and other facilities are being made by the Society's Headquarters staff. It is anticipated that papers given at the conference will be published as a single volume.

Information about hotel reservations and submission of titles can be obtained by writing the American Society for Microbiology, 19875 Mack Avenue, Detroit 36, Michigan.

E. M. FOSTER, *Secretary*

SOCIETY'S NEW NAME IN EFFECT

Observant readers of this issue of *Bacteriological News* will notice something new extending from the front cover to the back cover. Have you noticed it?

The Secretary's Office has received notification that effective December 27, 1960, the Society's name is officially the American Society for Microbiology. The Headquarters has sent out press notices regarding the name change and is working with the Society's officers on the many legal, financial and administrative details involved in changing the Society's name.

The dropping of the name "Society of American Bacteriologists" will not be abrupt. Changes take time. Certain activities now in progress would only be confused by a change in name. For example, those persons attending the Annual Meeting in Chicago will find the former name much in evidence. For a time, there will be some confusion, but it will not be great. Gradually, scientists and businesses throughout the world will become acquainted with our new name.

To many members the new name will be greeted with enthusiasm. Others will be nostalgic. But soon all Society members will become familiar with "American Society for Microbiology" and feel the same pride that has so long been felt for "Society of American Bacteriologists."

YOUR LAST NEWS?
PAY 1961 DUES NOW

Did you fail to receive your journals in February and March? If your answer to this question is *yes*, then this issue of the *News* is actually a gift to you and the last you will receive unless you pay your 1961 dues.

After the mailing of the January issues of the journals, all members whose dues have not been received are declared delinquent and their names withdrawn from journal mailing lists. We have, however, had these names retained for this issue of the *News* because we believe it is so full of interesting Society news and other features that all bacteriologists should have the chance to read it.

Now that your income tax is paid, why not send in your 1961 dues today? Your Society and profession needs your support, and you need the support of the Society. Just a word of warning: Back issues are still available, but if members wait too long to pay their dues we may not be able to supply all numbers of the journals. Remember you will get your choice of *Journal of Bacteriology* or *Applied Microbiology*, as well as *Bacteriological Proceedings*, *Bacteriological Reviews* and *Bacteriological News*.

Please, write that check today!

MEXICO BRANCH ESTABLISHED

The Society is happy to welcome the activation of its first new branch in the past five years. Microbiologists in Mexico have fulfilled the requirements for branch status and have activated the Mexico Branch of the Society.

In 1953, a group of Society members in Mexico submitted a petition for the establishment of a branch within the boundaries of the Republic of Mexico. In 1954, the Council of the Society unaminously approved the formation of the branch.

Unfortunately, there followed a series of circumstances which prevented our members in Mexico from activating their branch. These difficulties were finally overcome during the latter half of 1960 and as a result, the new branch has elected officers and is now in operation.

Mexico Branch officers for 1961 are: Carlos Casas-Campillo, President; Carlos del Rio-Estrada, Vice President; and Miss Enrigueta Pizarro-Suarez, Secretary-Treasurer.

Word has been received that the branch will hold its first meeting in Mexico City in March. A supply of Nomination Forms has been requested because "the branch plans to start a promotion to increase the number of its members so it can very soon be eligible to elect a Councilor."

To the Mexico Branch, the Society extends its congratulations and best wishes for success.

FILM LIBRARY MOVED TO HEADQUARTERS

Effective at once, the Society's motion picture films, formerly obtainable from the Committee on Materials for Visual Instruction in Microbiology, will be handled by the Society's Headquarters office.

All inquiries regarding rental and purchase of films, film abstracts, and information pertaining to motion picture films, should be directed to the attention of the Executive Secretary, American Society for Microbiology, 19875 Mack Avenue, Detroit 36, Michigan. The service of scheduling films and the mechanical handling of films will be provided by a commercial distributor in the Detroit area, and film **renters will return the films to the distributor and not to the Headquarters.**

Dr. Harry Morton, Chairman of the Society's Committee on Materials for Visual Instruction in Microbiology, has served faithfully in this capacity for 18 years, and has been responsible for the development of this important service to microbiology. The importance of this service is best reflected in the increased demand for film rentals which has now reached a point of several hundred rentals a year—entirely too many to be handled by a person with teaching and research responsibilities.

Dr. Morton will remain as Chairman of the committee and will devote his committee's efforts toward the collection and review of worthy new films—an activity more productive and fitting for a person with Dr. Morton's experience in visual instruction.

FIVE YEARS OF PRESIDENT'S FELLOWSHIPS

A preoccupation with politics, sputniks, the cost of living, and the latest model automobiles sometimes makes us overlook the finer things of life. This essay treats an act of generosity by one of our loyal sustaining members.

Several years ago representatives of Difco Laboratories expressed a desire to help the Society with a worthwhile new project. After many possibilities had been considered it was decided to use the proffered assistance to support travel grants known as President's Fellowships. This program, begun in 1956, has been described several times in *Bacteriological News*.

It would seem appropriate at this time to review the accomplishments of the President's Fellowship program. During the first five years of its existence, 51 awards were made aggregating almost $16,000, or a little over $300 per recipient. Here are the figures for each year.

Year	*Number of awards*	*Total amount awarded*
1956	8	$2,266.00
1957	11	2,565.30
1958	4	1,173.70
1959	15	5,681.15
1960	13	4,192.96
Total	51	$15,879.11

The value of this program is reflected in the responses of the recipients, who have been both grateful and enthusiastic. Apparently the awards fill a real need for small sums to permit travel for short periods of study. Difco Laboratories deserves the appreciation of all of us for making this worthwhile program a reality.

In practice, Difco Laboratories advances sums of money to the Society, whose Committee on President's Fellowships makes the awards. Details of the program can be obtained by writing the Chairman of the Committee, Dr. Arthur K. Saz, Nationl Institute for Allergy and Infectious Diseases, Building 5, Bethesda 14, Maryland.

E. M. FOSTER, *Secretary*

NEW JERSEY BRANCH HONORED

Society members are becoming well acquainted with the education and careers activities of the New Jersey Branch. Recognition of these activities has now come from outside the Society.

At the annual luncheon of the New Jersey Science Teachers Association, the branch was presented the Association's Atkins Award. The Atkins Award is presented annually "in recognition of outstanding cooperation with and service to the science teachers of the State of New Jersey. This award symbolizes the excellence of achievement on the part of an individual industry which marked the career of Pauline McDowell Atkins, pioneer in the professionalization of science teaching in New Jersey, both distinguished leader and useful servant of her fellow teachers".

Unique in this presentation is the fact that this represents the first time the Atkins Award has gone to an organization other than an industrial firm.

The presentation was made by Father Lucien Donnelly, Co-chairman of the Industrial Liaison Committee and accepted by Benjamin Schwartz, Chairman of the Education and Careers Committee of the New Jersey Branch.

Benjamin Schwartz accepting Atkins Award for New Jersey Branch

EDUCATION COMMITTEE ACTIVITIES

The Committee on Education will again sponsor a panel discussion on Microbiology in Introductory Biology at the Chicago meeting. The session on Wednesday afternoon, April 26, will include speakers from the AIBS Biological Sciences Curriculum Study and the AIBS Filmed Course and the Laboratory Block program. Additional topics will include Experiences with the Teaching of Microbiology in High School Biology and in Summer Institutes. Following the panel discussion, there will be a meeting of those interested in submitting proposals to the National Science Foundation for Summer Institutes in Microbiology for High School and College Teachers. Those interested in information concerning these proposals are requested to communicate in advance of the meeting with L. S. McClung, Department of Bacteriology, Indiana University, Bloomington, Indiana.

On Thursday afternoon the very successful program which was held at the Philadelphia meeting for selected high school students and teachers, will again be conducted for individuals in the Chicago area.

On Sunday afternoon, April 23, four films from the AIBS Biology Course will be shown beginning at 2:00 p.m. The showing of these films was canceled from the Philadelphia program.

Members of the Society who are interested in problems of microbiology in introductory biology are reminded that they may obtain, without charge, from the Executive Secretary a copy of the June, 1960, issue of *The American Biology Teacher*. This issue was sponsored by the Committee on Education and devoted exclusively to Microbiology in Introductory Biology and the printing and distribution of the issue has been made possible by a generous grant from the Difco Laboratories. Approximately 18,000 copies have been distributed since May, 1960.

NOMINEES FOR OFFICERS OF DIVISIONS

Persons who have been nominated for officers of the Divisions of the Society are listed below. Division officers will be elected at the business meetings held by the respective Divisions during the Society's Annual Meeting in April.

General Bacteriology

Chairman: Allen G. Marr, Dept. of Bacteriology, University of California, Davis.

Vice Chairman: J. L. Stokes, Dept. of Bacteriology and Public Health, Washington State University, Pullman.

Secretary: Roy Repaske, N.I.H., Bethesda, Md. Earling J. Ordal, Dept. of Microbiology, University of Washington, Seattle.

Agricultural and Industrial

Chairman: Harlow H. Hall, Northern Regional Research Laboratory, Peoria, Ill.

Vice Chairman: R. C. Bard, Research Laboratories, The National Drug Co., Philadelphia, Pa.

Secretary: C. F. Niven, American Meat Institute Foundation, University of Chicago, Chicago, Ill.

Soils Section Chairman: Guenther Stotsky, Central Research Laboratory, United Fruit Co., Norwood, Mass.

Bacterial Physiology

Chairman: Helen R. Whiteley, Dept. of Microbiology, University of Washington, Seattle.

Vice Chairman: H. D. Peck, Oak Ridge, Tenn.

Secretary: W. A. Wood, Dept. of Agricultural Chemistry, Michigan State University, East Lansing.
L. P. Hager, Dept. of Chemistry, University of Illinois, Urbana.

Medical Bacteriology

Chairman: Herbert R. Morgan, Dept. of Bacteriology, Strong Memorial Hospital, Rochester, N. Y.

Vice Chairman: Norman F. Conant, School of Medicine, Duke University, Durham, N. C.

Secretary: Tom R. Hamilton, University of Kansas Medical Center, Kansas City, Kansas.

Virology

Chairman: H. S. Ginsberg, Dept. of Bacteriology, University of Pennsylvania, Philadelphia.

Vice Chairman: H. H. Thornberry, Dept. of Plant Pathology, University of Illinois, Urbana.

Secretary: Neal B. Groman, Dept. of Microbiology, University of Washington, Seattle.

SOIL MICROBIOLOGY SECTION

After the annual breakfast in Philadelphia, D. Pramer, Chairman, introduced a discussion concerning the desirability of establishing a more formal organization as a Section of the Agricultural and Industrial Division. The proposal was unanimously passed. The officers elected for the current year (1960–61) were Chairman: H. Katznelson, Director of Microbiology Research Institute, Canada Dept. of Agriculture, Ottawa, and Vice-Chairman: G. Stotzky, United Food Company, Norwood, Massachusetts. It was recommended that the Vice-Chairman should succeed to the Chairmanship the following year. At the 1961 meetings in Chicago, there will be a session on Soils and Plant-Microbe Associations of special interest to the Section. A round table with a panel discussion on Recent Developments in Nitrogen Fixation will be held on Wednesday morning. The

1961 business meeting will follow the annual breakfast on Tuesday morning.

MEMBERS LOST OR STRAYED

The Headquarters is continuing its efforts to locate those Society members who cannot be located at their last known address. As long as these members are "missing," your Society is losing the dues of some of them, and some of these members are losing journals. Surely someone knows where these members are! Won't you please check the following list and send in a postcard if you have helpful information?

Bailey, Jane B., Naval Med. Field Research Lab., Marine Corps Base, Camp Lejeune, N. C.
Barthel, Dr. Christian, Bromma, Sweden
Cowart, Glenda S., CDC Box 185, Chamblee, Ga.
Carbone, Louis J., 508 Washington St., Geneva, N. Y.
Gurley, Caroline R., 3241 N. Street, N.W., Apt. 11, Washington, D. C.
Jakubowski, Virginia A., Crandall C, Univ. of Connecticut, Storrs, Conn.
Kupferman, Allan, Clark University, Worcester, Mass.
Lu, Wan Ching, 1510-A Hearst Avenue, Berkeley, Calif.
Lively, David H., Eli Lilly & Co., Microbiological Research Dept., Indianapolis 6, Ind.
Motley, Leo, 7402 S. Stewart, Chicago 21, Illinois
Nahmias, Andre Joseph, 76 Easton Rd., Brighton, Mass.
Navalkar, Ram G., Research Officer, Acworth Leprosy Home, Wadala, Bombay 31, India
Naylor-Foote, A. W. C., Dept. of Infectious Diseases, UCLA Medical Center, Los Angeles 24, California
Way, Marco F., Villanova University, Villanova, Pa.
Zubi, Mohammed S., The Chicago Medical School, 2713 West 15th, Chicago 8, Ill.

BACTI NEWS FEATURE

THE BSCS AND HIGH SCHOOL BIOLOGY

G. E. PETERSON

Department of Biology, University of Houston, Houston, Texas

Under the guidance of Dr. Arnold B. Grobman, the Biological Sciences Curriculum Study (BSCS) of the American Institute of Biological Sciences has launched an ambitious program to revise biology courses suitable for use in the nation's secondary schools. Dr. Grobman, formerly of the University of Florida, and his staff have established permanent headquarters at the University of Colorado in Boulder. A Steering Committee of distinguished biologists (under the chairmanship of Dr. Bentley Glass of Johns Hopkins University) establishes the over-all policies of the BSCS programs. The National Science Foundation has already granted nearly two million dollars for use by the BSCS.

Under the supervision of its Committee on Content of Curriculum (Dr. John M. Moore of Columbia University, Chairman), the BSCS gathered 69 biologists in Boulder for a Writing Conference during the summer of 1960. This group, comprised equally of high school teachers and college professors, prepared texts for three new experimental approaches to the teaching of high school biology. Laboratory study plays a more prominent part in all three versions than in most conventional biology courses.

During the current school year (1960–1961), 118 high school teachers in 15 BSCS Testing Centers and 13 Independent Test Schools are working with the experimental materials prepared during the 1960 Writing Conference. About 14,000 students are participating in this testing program. Each center has from six to nine teachers, with a local university biologist serving as consultant.

The teachers in each of the Testing Centers meet weekly to discuss their experiences with the BSCS materials. The results of these meetings are then reported back to the headquarters in Boulder. Two BSCS staff members gather additional information by visiting all Test Schools and conferring with administrators, teachers, and pupils.

To determine further the extent to which the goals of the 1960 Writing Conference are being achieved, tests developed by the Educational Testing Service are administered to the students. A second Writing Conference (scheduled for the summer of 1961) will use all of this feedback to revise the experimental texts. Then, in 1961–1962,

the BSCS will undertake an enlarged secondary school testing program with the revised materials from the Second Writing Conference.

A unique feature of the BSCS high school program is the series of laboratory block studies which are being prepared at the University of Texas by the Committee on Laboratory Innovations under the direction of Dr. Addison E. Lee. The schools using BSCS materials may choose to use one of the laboratory blocks in conjunction with the BSCS course materials. Each block consists of an intensive, six full weeks of laboratory study in a single area of biology. Depth rather than breadth is the central theme of these block programs. By progressing from simple to sophisticated experiments, the BSCS hopes to give the student a capsule view of the progressive achievements which make possible the advancements of science.

The BSCS recognizes the training of gifted students as an essential part of its program. The Committee on the Gifted Student, headed by Dr. Paul Brandwein of Harcourt, Brace and World Company, has completed a book, *Biological Investigations for Secondary School Students*, which outlines 100 research prospectuses of interesting out-of-class research projects for science-oriented students.

American Society for Microbiology members have played a prominent role in the development of the BSCS program. Dr. Perry Wilson is a member of the Steering Committee; Dr. David E. Davis and Dr. L. S. McClung serve on the Education Committee; Dr. Delaphine Wyckoff was on the Committee of Content of Curriculum; Dr. Alfred S. Sussman, author of the microbiology laboratory block titled *Microbes: Their Growth, Nutrition and Interaction*, is on the Committee for Innovations in Laboratory Instruction. During 1960–1961, Dr. Sussman's block of exercises in microbiology is being tested by students in two BSCS Testing Centers—New Brunswick, New Jersey, and Houston, Texas. The 1960 Writing Conference included American Society for Microbiology members Dr. Dean Anderson, Dr. G. E. Peterson, and Dr. Delaphine Wyckoff. In addition, two high school teachers (Mr. J. Maxwell Davis of Bosse High School, Evansville, Indiana and Miss Imogene Russell of Sandia High School, Albuquerque, New Mexico) participated in the preparation of the microbiology section of the experimental texts.

Persons interested in the progress of this program may be placed on the mailing list of the BSCS Newsletter by contacting BSCS Headquarters, McKenna Hall, University of Colorado, Boulder, Colorado. BSCS Newsletter No. 6 contains information on ordering copies of all the experimental volumes produced by the BSCS thus far.

NEWS AND ANNOUNCEMENTS

AMERICAN ACADEMY OF MICROBIOLOGY, INC.

The National Registry of Microbiologists

The American Board of Microbiology, a committee of the American Academy of Microbiology, Inc., met on December 16 and 17, 1960 to approve the establishment of the National Registry of Microbiologists. The purpose of the National Registry of Microbiologists is to recognize persons with such a degree of education in the field of microbiology at the bachelor's level, that these individuals have an adequate understanding of the scientific bases of applied methods. It is the intent of the Registry to provide recognition for training and scientific understanding in the field of microbiology.

For the purposes of the Registry, a microbiologist is defined as one who, by education and training, is possessed of a knowledge of the nature, characteristics, cultural and metabolic properties of microorganisms, has the necessary skills to isolate, cultivate and identify such organisms, and can evaluate and interpret technically the results obtained.

To be eligible for registration a candidate should,

1. Possess a bachelor's degree from an accredited college or university.
2. Have a major or specialization in a biological science.
3. Have college education in the following:
   Two years of chemistry including quantitative and organic chemistry
   One year of physics
   Mathematics through college algebra or its equivalent.
4. Have 30 semester credits or equivalent in biological science, of which at least 20 credits should be in the field of microbiology.
   Microbiology is understood to involve the study of microorganisms and to include:
   a. Courses in bacteriology, immunology, mycology, parasitology, protozoology, rickettsiology, tissue culture and virology.
   b. Courses in food, dairy, industrial, sanita-

tion, agricultural and applied bacteriology or microbiology.

c. Courses in genetics, physiology, metabolism, taxonomy, epidemiology and animal or plant physiology provided that such courses are oriented toward the study of microorganisms and their behavior or toward the reactions of various environments to the microorganisms.

5. Be of good character.

Until December 31, 1964, applicants may be registered without examination, providing they can demonstrate to the satisfaction of the Standards and Examination Committee of the Registry at least seven years of continuously active and competent work in microbiology after receipt of the bachelor's degree. The fee for such registration will be $25.00.

Those not qualifying for registration without examination must be prepared to take an examination which will be given twice yearly on approximately March 15 and October 15.

There will be two sections of the examination and the candidate is required to pass both sections.

The first section will be a comprehensive written examination in general microbiology, covering the methods of isolation, cultivation, identification and some knowledge of the nutrition, metabolism and physiology of microorganisms, with special emphasis on the bacteria.

The second section will be a specialty examination and each candidate will be required to pass a comprehensive written examination in any two of the following fields:

1. Agricultural and industrial microbiology.
2. Food, dairy and sanitation microbiology.
3. Pathogenic and medical microbiology.
4. Immunology and serology.
5. Virology (Including rickettsia).
6. Mycology.
7. Parasitology.

The fee for this examination is $25.00. The examinations will be given as close to the candidate's place of residence as possible.

A candidate qualified by experience or by successfully passing the examination will be designated as a Registered Microbiologist with the American Academy of Microbiology, Inc. and he receives a certificate to this effect. His name is entered in the Annual Registry of Microbiologists together with the specialties in which the examination was taken. The Annual Registry is sent to the Registered Microbiologists, to employers of microbiologists and to other interested persons. There will be an annual registration fee of $5.00 to cover the cost of maintaining and publishing the Annual Registry.

Application forms and additional information may be obtained from The Registrar, National Registry of Microbiology, 232 Burrill Hall, University of Illinois, Urbana, Illinois.

The Program of Certification at the Doctoral Level

The American Board of Microbiology, upon recommendation of its Standards and Examinations Committee for Public Health and Medical Laboratory Microbiology, has initiated a program for certification of microbiologists in Public Health and Medical Laboratory Microbiology at the doctoral level. It is planned to present the first certificates at the Annual Meeting of Fellows in Chicago on April 24, 1961.

The first to be certified will be those who meet the academic requirements and who have, through experience, demonstrated proficiency and stature in the field of microbiology. Later others will be certified following completion of a training and experience program which is now being developed.

For certification on the basis of experience the individual must have:

a. Attained the rank of professor or associate professor in a university acceptable to the American Board of Microbiology and have had five years of qualifying experience in teaching, research or practice in this field of specialization; or

b. Attained a rank equivalent to that of professor or associate professor in a research institution, public health or medical laboratory, or other comparable institution and five years of qualifying experience in teaching, research or practice in this field of specialization; or

c. Ten or more years of qualifying experience, research or practice in this field of specialization.

During the time specified under paragraphs (a), (b) and (c) above, he shall, in the opinion of the American Board of Microbiology, have achieved a position of unquestioned responsibility and eminence.

Application forms for certification in public health and medical laboratory microbiology may be obtained from The Secretary, American Board of Microbiology, 232 Burrill Hall, University of Illinois, Urbana, Illinois.

RESPONSES FROM NEW HONORARY MEMBERS

The November issue of *Bacteriological News* announced the election of two new Honorary Members—Dr. Karl F. Meyer and Dr. Stanhope Bayne-Jones. Following notification by President Herald Cox of their election, both new Honorary Members sent responses which are printed below and will be of interest to our members.

Dear Dr. Cox:

I am most grateful for your letter of December 13, in which you informed me that I have been

elected to honorary membership in the Society of American Bacteriologists. This honor is greatly appreciated, particulary since it is accompanied by your personal congratulations.

With warmest greetings and best wishes.

K. F. MEYER, M.D.

Dear Dr. Cox:

It is with a deep sense of my extraordinary good fortune that I acknowledge the receipt of your letter of December 13, 1960, informing me that I have been elected an Honorary Member of the Society of American Bacteriologists. I realize that the Society has conferred upon me one of its rarest honors and I am grateful to its members for this favor which I shall treasure most highly.

In addition, recalling our long friendship, I appreciate particularly your welcome into the distinguished company of Honorary Fellows, and thank you for your personal congratulations.

With high regard and best wishes.

STANHOPE BAYNE-JONES

SUMMER COURSES, 1961

Courses listed with the Society's office in response to the notice in *Bacteriological News* (November, 1960) are announced herewith. The information is arranged in the following order: name and address of college or university, name of department, title and number of course, credit in semester hours, duration of the course during the summer of 1961, name of instructor or person in charge, and prerequisities or special restrictions, if any.

University of Alabama—University. Dept. of Bacteriology—*General Bacteriology;* 14s, 4 cr.; June 5–July 12; Mildred A. Engelbrecht; limited to 18 students. *General Bacteriology;* 114s, 4 cr.; June 5–July 12; Mildred A. Engelbrecht; limited to 10 graduate students and teachers.

University of California at Los Angeles—Los Angeles. Dept. of Bacteriology—*Introductory Bacteriology and Microbiology;* Bact. 1, 4 cr.; June 19–July 28; G. J. Jann; general chem. *General Bacteriology;* Bact. 6, 2 cr.; June 19–July 28; W. R. Romig; not open to bacteriology majors. *Advanced Bacteriology;* Bact. 103, 5 cr.; June 19–July 28; V. J. Cabelli and M. R. Ball; Bact. 103.

Cornell University—Ithaca, N. Y. Division of Bacteriology—*General Bacteriology;* Bact. S 1; 2, 3 or 5 cr.; June 26–Aug. 5; P. J. Vandemark; beginning chem.

University of Maine—Orono. Dept. of Bacteriology—*Microbiology and Man;* B 22s (122s), 3 cr.; June 19–July 7 and July 10–July 28 (3 hr./day, 5 days/wk.); W. M. Bain; for non-science majors; graduate credit for education majors.

Michigan State University—East Lansing. Dept. Microbiology and Public Health—*Workshop in Bacteriology for Secondary Teachers;* MPH800, 3 cr.; July 31–Aug. 11; Frank R. Peabody; limited to 30 teachers.

Montana State College—Bozeman. Botany and Bacteriology Dept.—*Microbiology in Relation to Man;* Bact. 101, 4 qtr. cr.; June 13–Aug. 18; Louis DS. Smith. *Special Topics: Introductory Microbiology;* Bact. 580, 3 qtr. cr.; June 13–July 14; Louis DS. Smith; graduate credit for teachers who have had no microbiology. *Intermediate Microbiology;* Bact. 580, 3 qtr. cr.; July 17–Aug. 18; Louis DS. Smith; graduate credit for teachers who have had no microbiology.

San Francisco State College—San Francisco, Calif. Dept. of Biology—*General Microbiology;* Microbiol. 140, 5 cr.; June 26–Aug. 4; D. Fletcher; one year college chem., and one semester college biology; upper division undergraduates.

University of Southwestern Louisiana—Lafayette, La. Dept. of Bacteriology—*Fundamentals of Bacteriology and General Laboratory;* 200-01, 4 cr.; W. L. Flannery. *Pathogenic Bacteriology and Laboratory;* 350-51, 5 cr.; R. W. Traxler; introductory bacteriology. *Immunology and Serology, and Laboratory;* 370-71, 4 cr.; T. E. Wilson; pathogenic bacteriology or permission. *Bacteriology Laboratory;* 400-02, 2 cr.; W. L. Flannery; 10 hrs. in bacteriology or permission. *Bacteriological Problems;* 460-61, 2-6 cr.; W. L. Flannery; limited to advanced undergraduate majors or minors in bacteriology. *Advanced Problems;* 560-61, 2-6 cr.; W. L. Flannery; for graduate students. *Research Thesis;* 599, 1-6 cr.; W. L. Flannery; for graduate students. All courses run from June 7–Aug. 4.

Syracuse University—Syracuse. N. Y. Dept. of Bacteriology and Botany—*General Bacteriology;* Bact. 101aG, 3 cr.; July 5–Aug. 11; M. W. Jennison.

N.S.F. SUMMER INSTITUTES

This summer the National Science Foundation will help 20,000 high school and college teachers of science, mathematics, and engineering go back to school to take a new look at the subjects they teach and the ways they have been teaching them.

Grants totaling nearly $22.7 million to 260 colleges and universities have been announced in support of 395 summer institutes in 1961 as part of the effort to increase the classroom effectiveness of teachers.

Summer institutes offer teachers study oppor-

tunities in courses especially designed to (1) refresh their knowledge of fundamentals, (2) acquaint them with recent developments in science and mathematics, and (3) familiarize them with new approaches in presenting subject matter.

Since their inception in 1953, N.S.F. summer institutes have provided about 54,000 study opportunities for teachers on all levels. In-service institutes of the Foundation, which offer similar courses on an after-hours basis during the school year, have had a total enrollment of about 22,000. Academic year institutes, under which teachers leave school for a year to take college course work, have provided about 5,000 study opportunities.

UNDERGRADUATES TO PARTICIPATE IN RESEARCH

Undergraduates will work alongside scientists of more than 250 colleges and universities beginning next summer as a result of National Science Foundation grants.

The students will have the opportunity to engage in scientific research either as an individual working under the direct supervision of an established scientist, or directly with the scientist as a member of a research team.

The Foundation made available $3.2 million in 357 grants through its Undergraduate Research Participation program to help build the interest of superior students in research, to widen their understanding of scientific method, and to improve their ability to employ scientific investigative procedures.

The grants, together with 165 awards made last year, will enable research participation by a total of 2,400 undergraduates during the summer of 1961 and about 1,900 during the 1961 academic year. A number of the grants are for two years, permitting extension through the 1962-3 academic year. The newly-announced grants will allow for about 37 per cent of the participants to work in chemistry, 26 per cent in the biological sciences, 13 per cent in engineering, and 12 per cent in physics, with the remainder in astronomy, geology, mathematics, psychology, and the quantitative social sciences.

Students receive nominal stipends while engaged in the programs, and are chosen on the basis of applications made to the institution holding the program. A list of participating institutions may be obtained from the National Science Foundation, 1951 Constitution Ave., Washington 25, D. C.

SCIENCE TEACHERS OFFERED RESEARCH OPPORTUNITIES

College and secondary school science teachers will be encouraged to participate in scientific research as a result of two groups of National Science Foundation grants. The grants are part of a continuing effort to strengthen science education on all levels, and to advance scientific graduate education through participation in basic research.

Grants totaling about $700,000 have been made to 41 educational institutions to provide research participation programs for 350 college teachers of science. A total of $618,000 was granted 47 institutions for programs for 310 high school teachers. Both programs will enable teachers to help carry out the research projects of a university or college department and to work directly with the researchers in charge of the projects.

The research opportunities will provide a logical step of professional advancement for teachers with the required training who need the stimulation and identity with science that research participation can provide. The grants are expected not only to increase the effectiveness of science teaching, but to contribute to the numbers of active investigators of fundamental scientific problems.

College teachers participating in the program must hold at least a master's degree in the field in which research is proposed.

Participating teachers with a Ph.D. may receive stipends of up to $100 a week during the summer plus allowances for travel and dependents. Stipends for those holding a master's degree are limited to $75 a week.

Research programs for high school teachers will be of eight to 12 weeks duration during the summer. Teachers must hold, or be able to qualify for candidacy for, the Master of Science degree. Secondary school teachers will receive stipends of up to $75 a week during the summer plus allowances for travel and dependents.

Inquiries and applications for either program should be addressed to the directors of the programs at cooperating institutions.

$9.1 BILLION FEDERAL SUPPORT OF SCIENTIFIC RESEARCH IN 1961

The Federal Government will obligate an estimated $9.1 billion during fiscal year 1961 for the support of scientific research and development, according to an announcement from the National Science Foundation. The estimate includes $8.5 billion for conduct of research and development and $600 million for increase of R & D plant.

About $850 million of the $8.5 billion funds for conduct of research and development was marked for basic research in fiscal year 1961. The 1961 total of $9.1 billion compares with obligations of $7.4 billion in fiscal year 1959 and an estimated $8.6 billion for fiscal year 1960. Summary data for fiscal year 1961 reflects congressional action on the President's budget and subsequent administrative decisions.

In fiscal year 1961, three agencies—the Department of Defense, the Atomic Energy Commis-

sion, and the National Aeronautics and Space Administration—are expected to administer an estimated 90 per cent, or $7.6 billion, of the total obligations for conduct of research and development. These agencies in fiscal year 1960 also accounted for the same percentage of the total.

In fiscal year 1960, funds for basic research, $747 million, represented more than 9 per cent of the Federal Government's support of conduct of research and development. Forty-four per cent of total Federal obligations for basic research were allocated to educational institutions; 30 per cent to Federal agencies; 14 per cent to profit organizations; and 12 per cent to others.

It is estimated that about one-fourth of total obligations for conduct of research and development, or $1.9 billion, was committed for basic and applied research in fiscal year 1960. Of this amount, the physical sciences, including mathematical and engineering sciences, accounted for 56 per cent; the life sciences for 27 per cent; and the remaining 17 per cent was distributed among the psychological, social, and other sciences.

INDUSTRIAL RESEARCH BUDGETS TOTAL $9.4 BILLION

Private industry expended $9.4 billion for research and development in 1959. This was 15 per cent higher than the 1958 level, and represents a continuation of the upward trend in industrial R & D expenditures during the 1950's.

Estimates of R & D expenditures by industry indicate a somewhat smaller annual increase in 1960 (8 per cent) than was experienced in 1959. Industrial R & D expenditures are expected to reach $10 billion in 1960.

More than half (57 per cent) of the industrial R & D funds in 1959 came from the Federal Government. This largely reflects the Government's use of industrial facilities for the conduct of research and development on military and defense-related materials and equipment in such fields as guided missiles, manned aircraft, space exploration, electronics, and atomic energy devices.

The extent to which individual industries were engaged in federally financed R & D performance varied appreciably. Industries with the highest proportions of R & D performance financed by Federal funds were aircraft and parts (86 per cent) and electrical equipment and communication (70 per cent). In contrast, nearly all R & D performance was financed by the companies themselves in such industries as drugs and medicines; stone, clay, and glass products; petroleum refining and extraction; and primary metals.

Although the great bulk of industrial R & D performance is product-oriented, industry does nevertheless contribute significantly to the Nation's annual volume of basic research. Basic research performance funds totaled $344 million in 1959, which was 4 per cent of total R & D funds. Funds allocated for the performance of basic research in 1959 were 17 per cent greater than the $295 million total in 1958.

DATA ON U. S. SCIENTISTS

How much did scientists earn in 1960 in the United States?

In response to a National Science Foundation questionnaire, more than 110,000 full-time scientists answered this and a wide range of other questions providing a statistical profile of the experience, education, age, and other characteristics of American scientists. The data are being gathered and processed by the Foundation's National Register of Scientific and Technical Personnel.

Preliminary data released shows that more than 110,000 scientists reported a median annual salary for 1960 of $9,000—that is, half earned more than $9,000, and half earned less. The highest median salaries for 1960 were typically reported by those employed in industry, those with a doctorate, and those engaged in management or administrative duties.

Nearly half of the registrants reported their foremost specialty either in chemistry or the life sciences (agricultural, biological, and medical). Ten per cent designated physics, and nine per cent mathematics. The largest single field designated as the foremost specialty was chemistry.

Sixty per cent of the employed scientists indicated they held advanced degrees; 37 per cent had the doctorate and 23 per cent had the master's.

Although the median age for full-time employed scientists was 38, one-fourth reported 20 or more years of professional experience and 60 per cent had five to 19 years.

Full details of the study have appeared in Scientific Manpower Bulletin, No. 12, December, 1960, published by the National Science Foundation.

NEW HIGH SCHOOL BACTERIOLOGY MANUAL

For use in high school teacher institutes and for reference purposes for those who are concerned with problems of microbiology in introductory biology courses, Dr. Carl E. Georgi and Richard Y. Morita have developed a mineographed manual "Instructor's Manual of Bacteriological Exercises for the High School Biology Class". This has been used successfully in the Summer Science Institutes at the University of Nebraska (Lincoln, Nebraska) and a copy may be obtained, without charge, by those interested by writing to Dr. Georgi. The manual includes exercises designed to demonstrate activities of microorganisms in

"cycles" in nature and most exercises employ mixed cultures rather than pure cultures.

ELECTRON MICROSCOPE SOCIETY MEETING

The Electron Microscope Society of America will hold its 19th Annual Meeting August 23–26, 1961, in the Pittsburgh Hilton Hotel, Pittsburgh, Pa.

In addition to the general sessions of contributed papers, there will be a special session of short papers (5–7 minutes) on interesting, useful, and unusual electron microscope techniques. Abstracts (150 word limit) of all contributed papers for presentation at the technical sessions may be submitted before May 1, 1961 to the Program Chairman, A. R. Taylor, Research Division, Parke, Davis & Co., Detroit 32, Mich.

As a special feature of the meeting, three symposia are planned on:

"Ultrastructure of Protein Fibers—Collagen, Muscle and Keratin." Rubin Borasky, Chairman.

"Contribution of Electron Microscopy to Polymer Morphology." R. G. Scott, Chairman.

"The Fine Structure of Viruses." A. F. Howatson, Chairman.

Further information concerning the program and the meeting may be obtained from the Program Chairman.

OPEN ANIMAL DISEASE LABORATORY

The National Animal Disease Laboratory, located at Ames, Iowa, is nearing completion. This is a $16¼ million installation of the U. S. Department of Agriculture which has been under construction since July 1958.

Nearly all the animal disease research activities of the U. S. Government will be concentrated in this laboratory except those on exotic diseases which will continue to be investigated in the Plum Island Animal Disease Laboratory, located on a small island lying off the eastern tip of Long Island, New York, and the animal parasites and parasitisms which will continue to be studied at Beltsville, Maryland.

A large number of research workers will be transferred to Ames this spring and summer from a number of locations in the U. S. but the greater number will come from Beltsville, where all research on infectious diseases of animals will be closed down.

The new laboratory will employ about 125 scientists, made up of bacteriologists, virologists, cytologists, immunologists, biochemists and biophysicists, and will be staffed as rapidly as qualified personnel become available.

Persons interested in the activities of the new laboratory are invited to write to the Director: William A. Hagan, National Animal Disease Laboratory, Box 70, Ames, Iowa.

BRITISH COMMONWEALTH CULTURE COLLECTIONS

The Permanent Committee, British Commonwealth Collection of Microorganisms, has announced the 1960 edition of the "Directory of Collections and List of Species Maintained in Canada." The bulletin gives pertinent information regarding the personnel of, and species of microorganisms maintained in 52 Canadian culture collections.

Similar lists of species have been published by Australia, India, New Zealand, United Kingdom, Ghana and Trinidad. Lists may be purchased in the U. S. from the British Information Service, 45 Rockefeller Plaza, New York 20, New York.

THE FIRST MILLION

In the days before hugh government budgets, a number that exceeded seven or eight digits was referred to as astronomical . . . something that was "out of this world" . . . but now that we are hurling man-made satellites into the distant heavens even astronomical figures have become commonplace and simple millions seem to have been relegated to the mere fractional. Although a million dollars or a million miles may be unimpressive these days, a million elephants, a million whales . . . or a million abstracts . . . still seem to us fairly impressive concepts, especially when one thinks of them as being assembled in one place.

So it is with much pride and no apology that we announce the publication of our millionth abstract in this issue of *Biological Abstracts*. To abstract number 7936 in the section on General Bacteriology falls this signal honor. It seems particulary fitting that this millionth abstract is on a bacteriologic topic, for *Biological Abstracts* itself is the lineal descendant and successor to both *Abstracts of Bacteriology* and *Botanical Abstracts*.

Averaging more than 28,570 abstracts per year it has taken *Biological Abstracts* thirty-five years to provide coverage of one million biological research articles. However, with the publication this year of 87,000 abstracts and with plans for the publication of at least 100,000 abstracts next year and thereafter, it is quite likely that our second millionth abstract will be published before the end of this decade.

Biological Abstracts, Volume 36(3): February 1, 1961.

NECROLOGY

Jerome T. Syverton

Jerome T. Syverton began an outstanding, active career in microbiology as an instructor in Bacteriology at the University of North Dakota in 1928. Born in Courtenay, North Dakota in 1907, he entered the University of North Dakota in 1923,

obtaining an A.B. degree in 1927 and a B.S. degree in 1928. He graduated from Harvard University School of Medicine in 1931, and after an internship and assistant residency in Medicine at Duke University Hospital in 1931–32, he became an Assistant in Pathology and Bacteriology at the Rockefeller Institute for Medical Research. There he obtained basic knowledge in virology under the guidance of P. K. Olitsky, and in 1932 became a member of the faculty of the University of Rochester School of Medicine and Dentistry. Except for a sabbatical leave in 1942 at Vanderbilt University School of Medicine as Visiting Associate Professor of Pathology and Bacteriology, his fundamental and pioneering work involving for example tumor viruses, and multiple viral infections of single animal cells, as well as development of his outstanding skill as a teacher and student advisor, occurred during 1934–47 while in the Department of Bacteriology at the University of Rochester. For his outstanding research in virology, he received the Eli Lilly Award in Bacteriology and Immunology in 1938. From 1944–46 he was on active duty in the United States Navy as a Visiting Investigator at the Rockefeller Institute, and member of Naval Medical Research Unit 2 in the Pacific Theater. In 1947 he became Professor and Head of the Department of Microbiology at Louisiana State University School of Medicine, and since 1948, was Professor and Head of the Department of Bacteriology at the University of Minnesota.

During his academic career his enthusiastic and vigorous approach to professional life with simultaneous devotion to his family and friends, set an extraordinary example for students and associates. His graduate and post-doctoral students during twelve years at the University of Minnesota alone numbered over 65. His productivity as an investigator was remarkable, and during 1957–58, he was recipient of the Commonwealth Fund Award for Creative Work. Eighty-seven articles describing his own work and 119 in conjunction with his students and associates were published between 1933 and 1960. His stature in science and academic medicine was evidenced by his membership in 22 professional societies and 11 scientific advisory committees, and his enthusiastic support of science at an international and national level was widely recognized and appreciated. The world's scientific community has lost a creative and productive investigator, the educational community, an enthusiastic teacher, the community of his colleagues and associates, a true friend, and his family, an affectionate and lovable father.

* * *

Comments of Richard E. Shope of the Rockefeller Institute made at the beginning of a lecture presented to medical students at the University of Minnesota on February 14, 1961.

"I know from my own experience as a medical student some 40 years ago that the relationship of a sophomore medic to his professors is usually a rather impersonal one. You know whether the man is a good teacher or not, and whether he is fair, but you are usually not familiar, except in a vague sort of a way, with the scientific and academic achievements that raised him to a professorship in the medical school of the University of Minnesota.

Because I was a close personal and scientific friend of Dr. Syverton's, and because I believe you all should have some familiarity with the stature in science of the man who until recently was your Professor of Bacteriology, I hope that you'll not mind too much if I present a very brief and abstract account of the scientific achievements that made Dr. Syverton a distinguished, widely known, and much respected scientist.

He was a prolific worker in the field of virology and his interests ranged widely. Beginning his career with Olitsky at the Rockefeller Institute, he worked first on the viruses of vesicular stomatitis and equine encephalomyelitis, sharing in pioneering work with these agents.

Later he went to Rochester, where he initiated work with the rabbit papilloma and his continuing studies of the papilloma-to-carcinoma sequence in this virus-induced tumor contributed materially to our understanding of the progression through which a benign tumor cell acquires malignant properties. It was at Rochester too that, with Berry, he did his fundamental work dealing with multiple viral infections of single host cells, showing that the cells of virus-induced tumors could be superinfected with other non-neoplastic viruses.

From time to time throughout his career, Dr. Syverton contributed significantly to our understanding of the possible mechanisms by which viruses prevail and are perpetuated in nature. In this connection, he studied the host range of Western equine encephalomyelitis virus in various wild animal species and showed the hereditary transmission of this virus in the wood tick. In a similar vein, he demonstrated the potentiality of the trichina worm to serve as a transmitting agent for the virus of lymphocytic choriomeningitis.

Dr. Syverton was, for approximately the past 10 years, one of the leaders in the field of virus cultivation. In the early 1950's, with Scherer, he propagated poliomyelitis virus in tissue cultures devoid of nerve cells. This achievement followed close upon the heels of Enders', Robbins', and Weller's monumental work of a similar nature. Later also with Scherer, he extensively exploited the use of stable strains of mammalian cells, in the cultivation and study of viruses. This was a pioneering effort of great importance to virology. Lately, with Brand, he developed a hemagglutination test for the species determination of cultivated mammalian cells.

What was probably Dr. Syverton's most significant contribution was made very recently when he discovered with McLaren and Holland that the ribonucleic acid of poliovirus could infect nonprimate cells that were ordinarily refractory to infection with complete poliovirus. The importance of this discovery is very great and its significance to virus work in general and tumor virus work in particular will undoubtedly be far-reaching.

One of the very nicest things that I know about Dr. Syverton was the generosity with which he shared his scientific ideas, and their exploitation, with others, usually graduate students or younger assistants in his department. He published almost none of his most significant observations alone and, where he shared in the publication with others, his name was almost never in the senior author position.

Dr. Syverton was a fine scientist, a gentleman, and a grand person to have as a personal friend. I think that you were fortunate indeed to have had him as one of your professors for as long as you did."

NOTICES

Pathogenic Anaerobe Identification: A 3-week course in the isolation and identification of the pathogenic anaerobic bacteria will be given by the Dept. of Botany and Bacteriology, Montana State College, Bozeman, June 19 to July 7. Applications or requests for information should be directed to L. DS. Smith who will be in charge of the course.

Postdoctoral Research in Dermatology: The Dept. of Dermatology, University of Michigan, Ann Arbor, is offering postdoctoral training in research methods applicable to dermatologic investigation. Areas of interest include: biochemistry, immunology, mycology, and toxicology. Training in radioisotope techniques is also available. Openings will exist as of July 1, 1961. Interested persons should write I. A. Bernstein, 6649 Kresge Medical Research Building, University Hospital, Ann Arbor.

N.S.F. Life Sciences Research Proposals: The Division of Biological and Medical Sciences of the National Science Foundation announces that the next closing date for receipt of basic research proposals in the Life Sciences is May 15, 1961. Proposals received prior to that date will be reviewed at the summer meetings of the Foundation's advisory panels and disposition will be made approximately four months following the closing date. Proposals received after the May 15, 1961 closing date will be reviewed following the fall closing date of September 15, 1961.

Inquiries should be addressed to the Biological and Medical Sciences Division, National Science Foundation, Washington 25, D. C.

Clostridium Cultures Wanted: Paul D. Ellner, Dept. of Bacteriology, University of Vermont College of Medicine, Burlington, would appreciate receiving cultures of *Cl. tertium*, *Cl. lentoputrescens*, *Cl. hemolyticum*, *Cl. fallax* and *Cl. difficile*.

N.S.F. Graduate Laboratory Development Program: The National Science Foundation announces that September 1, 1961 is the next closing date for receipt of proposals in the Graduate Laboratory Development Program. This program requires at least 50 per cent participation by the institution with funds derived from non-Federal sources.

Purpose of the grants is to aid institutions of higher education in modernizing, renovating, or expanding graduate-level basic research laboratories used by staff members and graduate students. Only those departments having an on-going graduate training program leading to the doctoral degree in science at the time of proposal submission are eligible at present.

Proposals, as well as requests for additional information, should be addressed to: Office of Institutional Programs, National Science Foundation, Washington 25, D. C.

Subcommittee on Actinomycetes Workshop: A workshop on the application of actinophage-typing to classification of streptomycetes was held January 18–20 at the University of Minnesota. The workshop was organized by S. G. Bradley, Department of Bacteriology, University of Minnesota and was sponsored by the Subcommittee on Actinomyctes of the American Society for Microbiology, David Gottlieb, Department of Plant Pathology, University of Illinois, Chairman. Twenty actinomycete taxonomists from government, industrial and academic institutions attended and participated in the project.

AWARDS

Michael Heidelberger, visiting professor of immunochemistry at Rutgers University, and emeritus professor of immunochemistry at Columbia University, has been awarded the Louis Pasteur gold medal of the Swedish Medical Society. The medal is awarded at 10-year intervals to distinguished biochemists.

John F. Enders, Childrens Medical Center Boston, who won a Nobel Prize for developing a poliomyelitis vaccine, and **Joshua Lederberg,** Stanford University, Palo Alto, Calif., also a Nobel Prize winner, were among 15 scientists named by the Editors of *Time* magazine as U. S. "Men of the Year," whose work "shapes the life of every human presently inhabiting the planet."

William G. Walter, professor of bacteriology, at Montana State College, Bozeman, received the Montana State College Alumni Teaching Award. The award, consisting of a certificate of merit and

$200, is presented to a faculty member, chosen by a committee of students and faculty, who devotes a major portion of time to classroom teaching of undergraduates.

I. Forest Huddleson, professor of microbiology and public health at Michigan State University received the 1960 $1000 Kimble Methodology Award in San Francisco on October 31 during the Conference of State and Provincial Public Health Laboratory Directors. Dr. Huddleson developed the first satisfactory method for distinguishing brucella in 1928. Recently he devised a simpler and more useful method for determining the presence of brucella and other pathogenic bacteria in blood.

Cornelius B. Philips, assistant director of the Rocky Mountain Laboratory, Hamilton, Montana, was presented the Outstanding Achievement Award by the reagents of the University of Minnesota, "in recognition of noted professional attainment" at the University's June 4, 1960 convocation ceremonies.

Rene J. Dubos, Rockefeller Institute for Medical Research, New York City, has been named a recipient of a Distinguished Achievement Award presented by the editorial board of *Modern Medicine*, for work which has directly influenced medical progress in the United States.

NEWS ABOUT OUR MEMBERS

Harriet M. Felton formerly at the Medical Branch, University of Texas, Galveston, is now at the USPHS Indian Hospital, Gallup, New Mexico.

Daniel Billen, on leave from the M.D. Anderson Hospital and Tumor Institute of the University of Texas, Houston, has been appointed program director for metabolic biology in the Division of Biological and Medical Sciences of the National Science Foundation.

Josef DeLey, professor and director of the Laboratory of Microbiology, Rijksuniversiteit, Ghent, is spending the current semester at the University of Illinois, Urbana, as visiting professor of microbiology.

Gerald F. Taylor, formerly at the West Surburban Hospital, Oak Park, Ill., is now at the North Carolina Baptist Hospital, Winston Salem.

Ernest Jawetz, professor of microbiology and lecturer in medicine and pediatrics University of California Medical Center, San Franisco, was elected president of the Western Society for Clinical Research at the recent meeting of the Associated Western Clinical Societies in Carmel, California.

Julius E. Officer, VR Division, Fort Detrick, has recently been given a leave of absence to pursue post graduation studies at the University of Chicago for one year. He will be associated with **James W. Moulder,** Dept. of Microbiology and Isadore Gersh, Dept. of Anatomy. He plans to study the application of microhistochemical and electron microscopic techniques to virus-cell systems.

C. L. SanClemente has returned to the Dept. of Microbiology, Michigan State University, after spending his sabbatical leave at the University of Rome and in visiting microbiological laboratories in Italy, Spain, France, Germany, the British Isles, and the low countries and Scandinavian countries.

J. W. Foster, is a member of the editorial board of *Zeitschrift fur Allgemeine Mikrobiologie*, identified in a recent news release as a new German-published Journal of General Microbiology.

The third annual F. G. Novy Lecture at the University of Michigan was presented on December 15, 1960 by **Herman C. Lichstein,** Professor of Bacteriology, University of Minnesota. The title of the lecture was "Physiological Control Mechanisms in the Bacterial Cell."

Joseph P. Uscavage, formerly of the Department of Microbiology, University of Pennsylvania, Philadelphia, is now at the Research Division, Wm. H. Rorer, Inc. Philadelphia.

Elva A. Hyatt, formerly at Yale University, is now at the Biology Department, University of California at La Jolla, Calif.

H. A. Poindexter, who has been attached to the American Embassy in Tripoli, Libya, is now at the Malaria Eradication Training Center, Kingston, Jamaica.

Lloyd J. Sorensen has left the School of Medicine, University of California, Los Angeles, to join the Medicinal Laboratory, Fine Chemical Division, Nopco Chemical Co., Harrison, N. J.

Arthur B. Horowitz, formerly with E. R. Squibb & Sons, is now the Middle Atlantic representative for the Spinco Division of Beckman Instruments, Inc.

Arthur N. King, Medical Service Corp. USN, has been promoted to the rank of commander. Commander King is Instructor in Bacteriology and Assistant Head of the Bacteriology Branch at the Naval Medical School.

Helene A. Nathan, staff microbiologist at Haskins Laboratories, has been appointed research associate in the Dept. of Biological Sciences at Goucher College, and visiting research professor of medicine at the Medical College of Virginia.

Gerald D. Shockman has left the Institute of Cancer Research, Philadelphia, to become associate professor, Dept. of Microbiology, Temple University School of Medicine, Philadelphia.

Cornelius B. Philip, Rocky Mountain Laboratory, has been elected councilor of the American Society for Tropical Medicine and Hygiene.

Herman N. Eisen has been named head of the department of microbiology at Washington University School of Medicine, St. Louis, Mo.

Philip C. Eisman has been appointed assistant

director of the microbiologic division of the Research Department, CIBA Pharmaceutical Products, Inc.

Ann E. Heuer has been appointed research associate in microbiology at the Institute for Microbiology, Rutgers University, New Brunswick, N. J.

Society members recently joining the Department of Virology and Epidemiology, Baylor University Medical School, Houston, Texas, are: **Donald Dreyer** from the University of Pittsburgh School of Medicine; **W. D. McBride** from California Institute of Technology, Pasadena; **Kendall Smith** from the University of North Carolina School of Medicine.

Majorie LaSalle, formerly at the University of Arizona, has joined the Microbiology Section at M.D. Anderson Hospital, Houston, Texas.

Theodore J. Starr has joined the Kaiser Research Foundation, Richmond, Calif. He was formerly at the University of Texas Medical Branch, Galveston.

E. Staten Wynne has been appointed chief of the Microbiology-Cellular Biology Branch and research professor of microbiology at the School of Aviation Medicine, Brooks Air Force Base, San Antonio, Texas.

R. Z. Lockart has left the N.I.H. to join the Department of Bacteriology, University of Texas, Austin.

LOCAL BRANCH ACTIVITIES

NEWS FROM THE BRANCHES

New York City

The Committee on Career Guidance of the New York City Branch has initiated a program which has as its main purposes (a) the stimulation of interest in and study of the science of microbiology among high school students and (b) provisions for information and assistance to school science teachers with regard to the use of microorganisms as objects of study.

The committee is developing the following specific program:

1. Present talks and demonstrations to high school science clubs.
2. Advise students on projects.
3. Judge projects at science fairs.
4. Participate in high school Career Day programs.

REPORTS FROM BRANCH MEETINGS

Southern California Branch (W. R. Romig, Secretary-Treasurer)

December 3, 1960, University of California, Los Angeles.

1. Comparative studies on methods for the isolation of auxotrophic mutants of *Bacillus subtilis*. Wayne J. Brabander, Charles Hanson, and W. R. Romig, Dept. of Bacteriology, University of California, Los Angeles.

2. A comparative study of a phage lysate antigen with the culture filtrate antigen as employed in the gel double diffusion test in tuberculosis serology. Seymour Froman, Max D. Lechtman, Lois Scammon, Drake W. Will and Bertram R. Eckmann, Olive View Hospital, Olive View, California and Departments of Bacteriology and Pathology, University of California and Riverside County General Hospital, Riverside, California.

3. The accumulation and degradation of polysaccharides by *Escherichia coli* strain ML 30. Carlton Bovell and Richard Helgerson, University of California, Riverside.

4. Studies on bacteriophages of *Bacillus subtilis*. II. Methods of characterization. Anna May Brodetsky and W. R. Romig, Dept. of Bacteriology, University of California, Los Angeles.

5. Spinning disease in mice inoculated with rapidly growing Mycobacteria. Lois A. Scammon, Seymour Froman and Drake W. Will, Dept. of Bacteriology, University of California, Los Angeles, and Olive View Hospital, Olive View, California, and Dept. of Pathology, University of California, Los Angeles.

6. The Society of American Bacteriologists in relation to its local branches. Raymond W. Sarber, Executive Secretary of the Society of American Bacteriologists, Detroit, Michigan.

Special Lecture: "DNA of Bacterial Nucleoids and of Vegetative Bacteriophage as Seen in Ultrathin Sections." E. Kellenberger, Laboratory of Biophysics, School of Medicine, Geneva, Switzerland.

Colorado-New Mexico-Wyoming Branch (Janice Roark, Secretary)

October, 1960. Albuquerque, N. M.

Symposium: Virulence of Microorganisms

Moderator: James L. Tong

1. Staphylococci. William E. Clapper, Lovelace Foundation, Albuquerque, N. M.

2. Sensitizing properties of *Bordetella pertussis*. Neylan Vedros, Denver, Colo.

1961 OFFICERS OF LOCAL BRANCHES

Branch	*President*	*Vice President*	*Secretary-Treasurer*	*Treasurer*	*Councilor*
Allegheny	Paul Kost U.S.V.A. Hosp. Pittsburgh, Pa.	H. M. Gezon Grad. Sch. of Pub. Hlth. U. of Pittsburgh Pittsburgh, Pa	E. S. Lindstrom Dept. Bact. Pennsylvania St. U. University Park, Pa.		E. H. Ludwig Dept. Bact. Pennyslvania St. U. University Park, Pa.
Northern California and Hawaii	Alcor S. Browne Cal. St. Health Dept. Labs. Oxford St. Berkeley 4, Cal.	C. T. Townsend Nat. Canners Assn. 1950 Sixth St. Berkeley 2, Cal.	J. L. Ingraham Dept. Enology U. of California Davis, Cal.		R. E. Hungate Dept. Bact. U. of California Davis, Cal.
Southern California	J. E. Forney Los Angeles City Hlth. Dept. 111 E. First St. Los Angeles 12, Cal.	W. R. Romig Dept. Bact. U. of California Los Angeles 24, Cal.	A. J. Andreoli Los Angeles St. Col. 5151 State College Dr. Los Angeles 32, Cal.		H. M. Kurtz Dept. Bact. U. of Southern Cal. Los Angeles 7, Cal.
Colorado-New Mexico-Wyoming	W. E. Clapper Lovelace Clinic 4800 Gibson Blvd. S.E. Albuquerque, New Mexico	T. L. Chow Colorado State U. Fort Collins, Colo.	Janice Roark (Sec.) U. of Colo. Med. Center Denver 20, Colo.	Mary Rothlauf Microb. Div. Fitzsimmons Army Hosp. Denver, Colo.	S. M. Morrison Dept. Path. & Bact. Colorado St. U. Fort Collins, Colo.
Connecticut Valley	J. R. Cohen Springfield Hosp. 759 Chestnut St. Springfield, Mass.	Elizabeth Robinton Smith College Northampton, Mass.	J. A. Cameron U. of Connecticut Storrs, Conn.		R. C. Cleverdon Dept. Bact. U. of Connecticut Storrs, Conn.
South Florida	Bennett Sallman U. of Miami Sch. of Medicine Coral Gables, Florida	M. M. Streitfeld Dept. Microb. U. of Miami Coral Gables, Florida	Ann Beasley (Sec.) Dept. Microb. U. of Miami Coral Gables, Florida	Warren Hoffert St. Bd. of Hlth. 1350 N.W. 14th St. Miami, Florida	M. Michael Sigel Dept. Microb. U. of Miami Coral Gables, Florida
Illinois	C. C. Lindegren Southern Illinois U. Carbondale, Ill.	H. D. Slade, Northwestern U. Medical School Chicago, Ill.	C. J. Rickher (Sec.) 437 N. Butrick St. Waukegan, Ill.	N. M. Szukala 2917 N. Linder Ave. Chicago 41, Ill.	C. J. Rickher 437 N. Butrick St. Waukegan, Ill.
Indiana	W. A. Konetzka Dept Bact. Indiana U. Bloomington, Ind	W. M. Stark Eli Lilly & Co. Indianapolis, Ind.	H. R. Garner Dept. Biology Purdue U. W. Lafayette, Ind.		E. D. Weinberg Dept. Bact. Indiana U. Bloomington, Ind.
Intermountain	D. W. Hill Dept. Bact. U. of Utah Salt Lake City, Utah	N. J. Marchette Ecological Research Dugway Proving Grounds Dugway, Utah	R. D. Sagers Dept. Bact. Brigham Young U. Provo, Utah		J. V. Beck Dept. Bact. Brigham Young U. Provo, Utah
Kentucky-Tennessee	Ralph Wiseman Dept. Bact. U. of Kentucky Lexington, Kentucky	H. Adler Biology Division Oak Ridge Nat. Lab. P.O. Box Y Oak Ridge, Tenn.	R. W. Beck Dept. Bact. U. of Tennessee Knoxville, Tenn.		Emil Kotcher Dept. Microb. U. of Louisville Louisville, Ky.
Maryland	A. G. Smith Dept. Microb.	J. M. Joseph 2241 Lake Ave.	P. J. Gerone Fort Detrick		D. E. Shay U. of Maryland

	Lexington, Kentucky	P.O. Box Y Oak Ridge, Tenn.	Knoxville, Tenn.		Louisville, Ky.
Maryland	A. G. Smith Dept. Microb. U. of Maryland Baltimore, Md.	J. M. Joseph 2241 Lake Ave. Baltimore 13, Md.	P. J. Gerone Fort Detrick Frederick, Md.		D. E. Shay U. of Maryland Sch. of Dentistry Baltimore 1, Md.
Mexico	C. Casas-Campillo Press Sta Teresa 158 Mexico 10 D.F., Mexico	C. Del Rio-Estrada Dept. Bioquimica Apdo. Postal 25159 U. Nacional Autonoma Mexico Mexico 20 D.F., Mexico	Enrequeta Pizarro-Suarez Calle de las Moras 644 Mexico 12 D.F., Mexico		
Michigan	R. N. Costilow Dept. Microb. & Pub. Hlth. Michigan St. U. East Lansing, Mich.	W. A. Rightsel Research Dept. Parke Davis & Co. Detroit 32, Mich.	Virginia Mallmann Dept. Microb. & Pub. Hlth. Michigan St. U. East Lansing, Mich.		C. W. Christensen Difco Laboratories, Inc. 920 Henry St. Detroit 1, Mich.
Eastern Missouri	A. C. Sonnenwirth Jewish Hosp. of St. Louis 216 S. Kingshighway Blvd. St. Louis 10, Mo.	J. F. Barrett Dept. Microb. U. of Missouri Columbia, Mo.	H. S. Goldberg Dept. Microb. U. of Missouri Columbia, Mo.		F. B. Engley, Jr. Dept. Microb. U. of Missouri Columbia, Mo.
Missouri Valley	A. F. Borg Kansas State U. Manhattan, Kan.	T. L. Thompson U. of Nebraska Lincoln, Nebraska	L. W. Hedgecock V. A. Hospital 4801 Linwood Blvd. Kansas City, Mo.		David Paretsky Dept. Microb. U. of Kansas Lawrence, Kan.
New Jersey	A. L. Demain Merck & Co., Inc. Rahway, N. J.	A. I. Laskin Squibb Inst. for Med. Research New Brunswick, N. J.	H. J. Vogel (Sec.) Inst. of Microb. Rutgers—The State U. New Brunswick, N. J.	W. E. Brown Squibb Inst. for Med. Research New Brunswick, N. J.	Werner Braun Inst. of Microb. Rutgers—The State U. New Brunswick, N. J.
Central New York	N. B. Naylor Dept. Bact. Cornell U. Ithaca, N. Y.	L. E. Bowers Dept. Bact. & Bot. Syracuse U. Syracuse 10, N.Y.	D. F. Splittstoesser Div. Food Science N.Y. State Agric. Exp. Station Geneva, N.Y.		Donald Lundgren Dept. Bact. & Bot. Syracuse U. Syracuse 10, N.Y.
Eastern New York	Charles Hurwitz U.S.V.A. Hospital Albany 8, N.Y.	E. J. Froelich 11 Edgewood Ave. Albany 3, N.Y.	Ann E. Hohenstein Div. Lab. & Research N.Y. State Dept. Hlth. Albany, N.Y.		W. Dexter Bellamy General Electric Res. Lab. PO Box 1080 Schenectady, N. Y.
New York City	J. R. Lucker Becton, Dickinson & Co. Rutherford, N.J	Marion Wilson St. Luke's Hospital 113 St. & Amsterdam Ave. New York, N.Y.	A. C. Dornbush (Sec.) American Cyanamid Co. Pearl River, N.Y.	Edward Konopka CIBA Pharmaceutical Prod., Inc. Summit, N.J.	Philip C. Eisman CIBA Pharmaceutical Prod., Inc. Summit, N.J.
North Carolina	Maurice Shepard Naval Med. Fld. Res. Lab. Camp Lejune, N.C.	J. J. McNeill N. C. State College Raleigh, N.C.	Mary A. Poston Duke U. Med. Center Durham, N.C.		J. Q. Thayer U. of N.C. Sch. Pub. Hlth. Chapel Hill, N.C.
North Central	D. W. Watson Dept. Bact. & Immunol. U. of Minnesota Minneapolis, Minn.	E. M. Foster Dept. Bact. U. of Wisconsin Madison, Wis.	Nora Larson St. Olaf College Northfield, Minn.		G. M. Needham Mayo Clinic Rochester, Minn.

1961 BRANCH OFFICERS—*Continued*

Branch	*President*	*Vice President*	*Secretary-Treasurer*	*Treasurer*	*Councilor*
Northeast	Catherine Atwood Boston City Hlth. Lab. Boston, Mass.	Delaphine Wyckoff Dept. Bot. & Bact. Wellesley College Wellesley, Mass.	Alice T. Marston Boston U. Sch. Med. 80 E. Concord St. Boston 18, Mass.		H. E. Lind Sias Laboratory Brooks Hospital Brookline 46, Mass.
Northwest	R. C. Hurd Dept. Biology Gonzaga U. Spokane, Wash.	N. B. Groman Dept. Microb. U. of Washington Seattle 5, Wash.	Jane Nishio Rocky Mtn. Lab. Hamilton, Mont.		R. H. McBee Dept. Bot. & Bact. Montana State College Bozeman, Mont.
Ohio	A. B. Stravitsky Dept. Microb. Western Reserve U. Cleveland, Ohio	E. B. Shirling Ohio Wesleyan U. Delaware, Ohio	B. A. Steinberg The Wm. S. Merrell Co. Cincinnati 15, Ohio		H. Earle Swim Dept. Microb. Western Reserve U. Cleveland 6, Ohio
Eastern Pennsylvania	Joseph S. Gots Dept. Med. Microb. U. of Pennsylvania Philadelphia 4, Pa.	none	Elizabeth H. Fowler Temple U. Broad & Montgomery Sts. Philadelphia 22, Pa.		Carl F. Clancy Bact. Dept. U. Pennsylvania Hosp. Philadelphia 7, Pa.
Puerto Rico	Carlos M. Berrocal Dresde 468 Puerto Nuevo, P.R.	Aida L. Guardiola Tropical Res. Med. Lab. APO 851 New York, N.Y.	Maria A. Medina Box 1082 Pio Poiedras, P.R.		Americao Pomales-Lebron Dept. Bact. School of Tropical Medicine San Juan, Puerto Rico
Rio de Janeiro	G. A. Costa Caixa Postal 926 Rio de Janeiro, Brazil	M. Goto Inst. Oswaldo Cruz Caixa Postal 926 Rio de Janeiro, Brazil	Anita Panek Escola de Quimica da U.B. Av. Pasteur, 404 Rio de Janeiro, Brazil		G. A. Costa Caixa Postal 926 Rio de Janeiro, Brazil
South Central	W. A. Pierce, Jr. Microb. Dept. Tulane U. Sch. of Med. New Orleans 12, La.	W. L. Flannery Dept. Bact. Southwestern Louisiana U. Lafayette, La.	J. D. Schneidau, Jr. Microb. Dept. Tulane U. Sch. of Med. New Orleans, La.		W. A. Pierce, Jr. (Alternate) Microb. Dept. Tulane U. Sch. of Med. New Orleans 12, La.
Southeastern	R. G. Eagon Dept. Bact. U. of Georgia Athens, Ga.	R. W. Brown Box 496 Tuskegee Institute, Ala.	F. M. Boyd Poultry Disease Res. Ctr. U. of Georgia Athens, Ga.		Margaret Green Dept. Bact. U. of Alabama University, Ala.
Texas	J. B. Davis Field Research Lab. Socony Mobil Oil Co., Inc. Dallas, Texas	Isaac Peters Texas A. & M. College College Station, Texas	E. O. Bennett Dept. Biology U. of Houston Houston, Texas		E. B. M. Cook State Health Dept. Austin 1, Texas
Virginia	Catherine Russell Dept. Microb. U. of Virginia Charlottesville, Va.	H. T. Knighton Medical School of Va. Richmond, Va.	Grace J. Blank College of William & Mary Williamsburg, Va.		H. J. Welshimer Dept. of Microb. Med. College of Virginia Richmond, Va.
Washington, D. C	Howard Reynolds U. S. Dept. Agric. Beltsville, Md.	R. W. Doetsch Dept. Microb. Howard University	Elizabeth J. Oswald Food & Drug Adm.		W. L. Sulzbacher Meat Laboratory EURDD Agric. Res. Service

3. Acid-fast bacilli: Metabolic aspects. Eugene W. Rypka, Dept. of Biology, University of New Mexico, Albuquerque.

4. The study of *in vivo* brown bacteria as an approach to understanding pathogenicity. William Segal, Dept. of Microbiology, University of Colorado School of Medicine, Denver.

Illinois Branch (C. J. Rickher, Secretary)

October 21, 1960. Hiram Walker Hall, Peoria. Combined meeting with the Peoria Section of the American Chemical Society.

1. Certain haematologic effects of X-radiation on the Goldfish *C. auratus*. I. L. Shechmeister, L. J. Watson, V. W. Cole and L. L. Jackson, Dept. of Microbiology and Cooperative Fisheries Laboratory, Southern Illinois University, Carbondale.

2. The question of immunological hyper-reactivity in naval recruits with acute rheumatic fever. Y. E. Crawford and M. V. McNamara, Naval Medical Research Unit, No. 4, Great Lakes Naval Training Station, Great Lakes, Ill.

3. The value of quantitative urine cultures. H. Ivan Brown and James L. Watson, Methodist Hospital, Peoria, Ill.

4. Studies on the anti-microbial action of juvenile hormone extracts. R. A. Slepecky and L. I. Gilbert, Dept. of Biological Sciences, Northwestern University, Evanston, Ill.

5. Germination of bacterial endospores with calcium and dipicolinic acid. H. Reimann and Z. John Ordal, Dept. of Food Technology, University of Illinois, Urbana.

6. Electron microscopy studies of saccharomyces. C. C. Lindegren and T. Hirano, Biological Research Laboratory, Southern Illinois University, Carbondale.

7. The allantoin fermentation. R. C. Valentine, R. J. Bojanowski and R. S. Wolfe, Dept. of Microbiology, University of Illinois, Urbana.

8. Anaerobic dissimilation of glucose by *Vibrio comma*. A. L. Unger and R. D. DeMoss, Dept. of Microbiology, University of Illinois, Urbana.

9. The utilization of electrophoresis for assaying antibiotics and other serum components. G. H. Scherr, E. Leuthner and La Verne Decker, Consolidated Laboratories, Chicago Heights, Ill.

Guest Speaker: Dr. Llowell P. Hager, Assistant Professor of Biochemistry, University of Illinois, Urbana, Illinois, "Enzymatic Chlorination in Relation to the Biosynthesis of Natural Products"

Indiana Branch (Harold Garner, Secretary-Treasurer)

October 7, 1960. Indiana Academy of Science. Manchester College, North Manchester, Ind.

1. Application of Petuely's medium to the selection and differentiation of *Lactobacillus bifidus*. H. R. Murray and P. S. Prickett, Mead Johnson and Co., Evansville, Ind.

2. The influence of serum on the cytopathic effect of measles virus. R. A. Moura and L. Ferguson, Chas. Pfizer and Co., Terra Haute, Ind.

3. A programmable multiple syringe driver for use in metabolic studies with filamentous fungi. M. F. Jenkins and H. R. Garner, Purdue University, Lafayette, Ind.

4. Action of cetyltrimethylammonium bromide on the bacterial cell. W. Nakatsukasa and W. Konetzka, Dept. of Bacteriology, Indiana University, Bloomington.

5. Growth characteristic of primary cells in suspended culture. S. J. Cieciura, M. Jewell, B. Hadar and J. Y. White, Chas Pfizer and Co., Terra Haute, Ind.

Guest Speaker: Dr. Marion Hodes, Indiana University Medical Center, Indianapolis. "The Status of Cancer Research in the United States."

Intermountain Branch (Richard D. Sagers, Secretary-Treasurer)

December 3, 1960, Weber College, Ogden, Utah.

1. The transport of sugars in *Escherichia coli*. Dexter Rogers, Dept. of Food and Nutrition, Utah State University, Logan.

2. Specific activities of enzymes comprising the acetate generating system in *Diplococcus glycinophilus*. Sigrid M. Klein and Richard D. Sagers, Dept. of Bacteriology, Brigham Young University, Provo, Utah.

3. Factors affecting metabolism of *Hansenula anomala*. Lee R. Chugg, Sheril D. Burton and Don H. Larsen, Dept. of Bacteriology, Brigham Young University, Provo, Utah.

4. Virulence and citrulline ureadase activity in *Pasteurella tularensis*. Nyven Marchette, Ecology Research, Dugway Proving Grounds, Dugway, Utah, and Dept. of Bacteriology, University of Utah, Salt Lake City.

5. Studies on two strains of western equine encephalitis virus. Richard Ushijima and Louis P. Gebhardt, Dept. of Bacteriology, University of Utah, Salt Lake City.

6. Submerged growth patterns of mycobacteria. Ernest H. Runyon, Microbiology Research Laboratory, Veterans Administration Hospital, Salt Lake City, Utah.

7. Bacteriological aspects of stream pollution investigations in Montana 1956–1960. Sheldon P. Hayes, Dept. of Bacteriology, Weber College, Ogden, Utah.

8. Bacterial diseases of the Terete Vanda orchid, *Vanda Mis Joaquim*. Satoru Oshiro, Dept. of Bacteriology, University of Utah, Salt Lake City.

9. Susceptibility studies to *Pasteurella tularensis* of mice and guinea pigs. Bert Thorpe and Stanley

Marcus, Dept. of Bacteriology, University of Utah, Salt Lake City.

10. Rickettsiae persistence and serological response in wild rodents challenged with *Coxiella burneti*. Robert W. Sidwell and L. P. Gebhardt, Epizoology Laboratory, Ecological Research, University of Utah, and Dept. of Bacteriology, University of Utah, Salt Lake City.

11. Cell-free antigens as immunizing agents in turkey staphylococcosis. John R. Molenda and Paul B. Carter, Dept. of Bacteriology, Utah State University, Logan.

12. Penicillin resistant staphylococci: The inoculum effect. Kameron Maxwell, L. P. Gebhardt, and Ralph Knight, Fort Douglas Veterans Administration Hospital, and Dept. of Bacteriology, University of Utah, Salt Lake City.

Kentucky-Tennessee Branch (Raymond W. Beck, Secretary-Treasurer)

October 28 and 29, 1960. Vanderbilt University, Nashville, Tennessee.

1. Spectral studies of chrysogenin, a pigement produced by *Penicillium chrysogenum*. Frederick T. Wolf, Y. T. Kim, and A. E. Jones, Dept. of Biology, Division of Molecular Biology, Vanderbilt University, Nashville, Tenn.

2. A simplified method for counting anaerobic rumen bacteria. D. W. Claypool, D. R. Jacobson, and R. F. Wiseman, Dept. of Dairy and Microbiology, University of Kentucky, Lexington.

3. Studies on the loss of penicillin activity in the rumen of cattle fed leguminous diets. B. Pivo, R. F. Wiseman, D. R. Jacobson and W. M. Miller. Depts. of Microbiology and Dairy, University of Kentucky, Lexington.

4. Bacteriocinic strains of Enterobacteriaceae. Guy T. Barry and Vella Abbott, University of Tennessee Memorial Research Center, Knoxville, Tennessee and Ray Leffler and Edna Mynatt, East Tennessee Baptist Hospital, Knoxville.

5. Effect of the endotoxin of *Salmonella typhosa* on the coronary vascular bed of the dog. Jerry B. Scott, Edward D. Frohlich, and Elmo S. Dooley. U. S. Army Medical Research Laboratory, Fort Knox, Kentucky.

6. Studies on the relationships of bacterial cell walls, antigenic structures and bacteriophage absorption sites. Sidney D. Crouch and James C. Humphries. Dept. of Bacteriology, University of Kentucky, Lexington.

7. Cellular immunity in tularemia. Margaret Stansberry and John M. Woodward. Dept. of Bacteriology, University of Tennessee, Knoxville.

8. The effect of 2,4 dinitrophenol on rats treated with ATP and inorganic phosphate. Gennaro J. Miraglia and John M. Woodward. Dept. of Bacteriology, University of Tennessee, Knoxville.

9. Branching in *Lactobacillus bifidus*. Manuel Figueroa and R. H. Weaver, Dept. of Microbiology, University of Kentucky, Lexington.

10. Effect of pyridoxine hydrochloride and pyridoxal phosphate on the hematocrit values of chicks infected with *Salmonella pullorum*. Ronald A. Le Clair and D. Frank Holtman, Dept. of Bacteriology, University of Tennessee, Knoxville.

11. The roles of various fractions of *Pseudomonas aeruginosa* in its pathogenesis. Pinghui V. Liu, Yoshio Abe and Janice L. Bates. Dept. of Microbiology, University of Louisville School of Medicine, Louisville, Kentucky.

12. Preliminary studies on the respiration of aerobic actinomycetes. Theressa Redmon and Margaret Hotchkiss, University of Kentucky, Lexington.

13. Cellular interactions during bacterial senescence and decline. Arthur P. Harrison, Jr., Bacteriology Section, Division of Molecular Biology, Vanderbilt University, Nashville, Tennessee.

14. Evaluation of techniques for the demonstration of *Trichomonas vaginalis*. Barbara H. Sherrad and Emil Kotcher, University of Louisville School of Medicine, Louisville, Kentucky.

15. Studies of *Hemophilus influenzae* in acute upper respiratory infection. Sarah H. Wood Sell, Kate Welch, and Robert S. Sanders, Dept. of Pediatrics, Vanderbilt University School of Medicine, Nashville, Tennessee.

16. Bacteriology of bacteroides infections. James Burns and Mary Vivian Shoemaker, University of Tennessee Medical Units, Memphis, and The Baroness Erlanger Hospital, Chattanooga, Tennessee.

17. Studies on the mechanism of induced radioresistance in *Escherichia coli*. M. S. Engel and H. I. Adler, Biology Division, Oak Ridge National Laboratory, Oak Ridge, Tennessee.

Maryland Branch (Peter J. Gerone, Secretary-Treasurer)

February 16, 1961. University of Maryland School of Medicine, Baltimore.

Scientific Session: Tissue Culture.

1. Application of the *in vitro* chick embryo system for study of the West Nile virus. Ollie R. Eylar, Dept. of Microbiology, University of Maryland School of Medicine, Baltimore.

2. Virus vaccines: Progress in the tissue culture era. Ann E. Schluederberg, Section of Infectious Diseases, University of Maryland School of Medicine, Baltimore.

3. Fluorescence microscopy of giant cells induced by viruses and radiation. Bernard Roizman, Dept. of Microbiology, The Johns Hopkins University School of Medicine, Baltimore, Md.

Michigan Branch (Marvis Richardson, Secretary-Treasurer)

December 10, 1960, Henry Ford Hospital, Detroit, Michigan.

1. Serum hepatitis and clinical evaluation of blood components sterilized with beta-propiolactone. G. A. Lo Grippo, Henry Ford Hospital, Detroit.

2. Evaluation of alpha-phenoxyethyl penicillin and alpha-phenoxymethyl penicillin in therapy of *Staphylococcus aureus* infections. J. P. Truant, Henry Ford Hospital, Detroit.

3. Bacteriologic study of dental caries immunity. Gordon E. Green, Henry Ford Hospital, Detroit.

4. The response *in vitro* of different cell types to a filterable agent. H. F. Maassab, School of Public Health, University of Michigan, Ann Arbor.

5. The present status of diagnosis and research concerning human listeriosis. W. C. Eveland, School of Public Health, University of Michigan, Ann Arbor.

6. Clinical aspects of gram-negative septicemia and endotoxin shock. A. B. Vial, University Hospital, Ann Arbor.

7. *In vitro* interactions of human plasma and endotoxin. A. G. Johnson, Department of Bacteriology, University of Michigan, Ann Arbor.

Eastern Missouri Branch (James T. Barrett, Secretary-Treasurer)

December 3, 1960. Jewish Hospital, St. Louis, Missouri.

1. Mycetoma caused by *Nocardia convoluts*. Morris Moore, Homer Phillips Hospital, St. Louis.

2. Immunologic studies with *Geotrichum candidum*. C. W. Cheek and James T. Barrett, Dept. of Microbiology, School of Medicine, University of Missouri, Columbia.

3. The laboratory diagnosis of pyelonephritis. D. A. B. Lindberg, Dept. of Pathology, School of Medicine, University of Missouri, Columbia.

4. Studies on staphylococcal hemolysins. R. F. Gray and F. B. Engley, Jr., Clinical Laboratories, St. Louis, and Dept. of Microbiology, School of Medicine, University of Missouri, Columbia.

5. Antibiotics as inhibitors of bacterial cell wall synthesis. Jack Strominger, Dept. of Pharmacology, School of Medicine, Washington University, St. Louis.

6. Survival of leptospira in body tissues and fluids. D. Blenden, A. Mishra and H. S. Goldberg, Dept. of Veterinary Bacteriology and Parasitology, School of Veterinary Medicine, and Dept. of Microbiology, School of Medicine, University of Missouri, Columbia.

7. Studies on bone formation in organ culture. A. A. White, Dept. of Biochemistry, School of Medicine, University of Missouri, Columbia.

8. Extraction of infectious RNA from dengue virus. Irene Schulze, Dept. of Microbiology, St. Louis University, School of Medicine, St. Louis.

New Jersey Branch (Henry J. Vogel, Secretary)

November 15, 1960. Caldwell College, Caldwell, N. J.

"Problems in Antibody Formation"

1. Present concepts of antibody formation. Benvenuto G. Pernis, Institute of Microbiology, Rutgers University, New Brunswick, N. J., and University of Milan, Milan, Italy.

2. Histological and histochemical aspects of the immune response as correlated to functional activity of lymphoid tissues. G. J. Thorbecke, Dept. of Pathology, N.Y.U. School of Medicine, New York, N. Y.

3. Studies on antibacterial antibodies in mice. M. Landy, Div. of Immunology, National Cancer Institute, N.I.H., Bethesda, Md.

December 15, 1960. Institute of Microbiology, Rutgers University, New Brunswick, N. J.

"Science and the Humanities—A Gap and Some Bridges." Houston Peterson, Dept. of Philosophy, Rutgers University, New Brunswick, N. J.

January 20, 1961. Johnson & Johnson Research Center, New Brunswick, N. J.

"Some Current Thoughts on Biochemical Evolution"

1. Photosynthesis—Modern and ancient. Philip H. Abelson, Geophysical Laboratory, Carnegie Institution of Washington, Washington, D. C.

2. Pathways of lysine synthesis as biochemical fossils. Henry J. Vogel, Institute of Microbiology, Rutgers University, New Brunswick, N. J.

3. Evolutionary aspects of protein structure. Christian B. Anfinsen, Laboratory of Cellular Physiology and Metabolism, National Heart Institute, N.I.H., Bethesda, Md.

Central New York Branch (Landon E. Bowers, Secretary-Treasurer)

November 5, 1960, Geneva, New York.

1. Bactericidal properties of human and rabbit platelets. Ralph F. Jacox and Richard Jago, University of Rochester School of Medicine, Rochester, N. Y.

2. Chemical analyses of sporulating and nonsporulating cells of *Bacillus cereus*. J. J. Cooney and D. G. Lundgren, Dept. of Bacteriology and Botany, Syracuse University, Syracuse, N. Y.

3. The bactericidal properties of gaseous propylene oxide and its application to dry powdered foods. C. W. Bruch and M. G. Koesterer, Wilmot Castle Co., Rochester, N. Y.

4. Reduction of bacterial contamination of egg white with beta-propiolactone. M. G. Koesterer and C. W. Bruch, Wilmot Castle Co., Rochester, N. Y.

5. Some factors affecting nitrification by *Aspergillus*. L. Overrein and M. Alexander, Laboratory of Soil Microbiology, Cornell University, Ithaca, N. Y.

6. The effect of toluidine blue, 9-aminoacridine and alpha picolinic acid on the hydrogen transport system of *Desulfovibrio desulfuricans*. Sister M. Regina Lanigan OSF, Rosary Hill College, Buffalo, N. Y.

Address: "Studies on the Mode of Action of Streptomycin". Dr. Charles Hurwitz, Medical Research Laboratories, Veterans Administration Hospital, Albany, New York.

New York City Branch (A. C. Dornbush, Secretary)

January 19, 1961. Hotel Statler, New York City.

1. Immunoelectrophoretic studies of human leukocytes: A preliminary report. L. Korngold, G. van Leeuwen, and D. G. Miller, Hospital for Special Surgery, Philip D. Wilson Research Foundation, affiliated with The New York Hospital-Cornell Medical Center and The Division of Clinical Chemotherapy, Sloan-Kettering Institute for Cancer Research, New York, N. Y.

2. The use of human tumor HEp #3 in experimental cancer chemotherapy. Frederick C. Kull, Madelon Grimm-Wehner, and Norbert McHugh, Research Dept., CIBA Pharmaceutical Products Inc., Summit, N. J.

3. The relation of antibody to growth of Walker Carcinoma. Daniel A. Boroff, New England Institute of Medical Research, Ridgefield, Conn.

4. Germicidal effect of malucidin *in vitro*. R. N. Arch, Institute of Applied Biology, New York, N. Y.

5. Comparison of four tetracycline antibiotics against a *Salmonella choleraesuis* var. *Kunzendorf* infection in mice. George O. Gale, Agricultural Division, American Cyanamid Company, Pearl River, N. Y.

6. The effectiveness of several tetracyclines in the control of an experimental PPLO infection in chickens. A. R. Whitehill, Agricultural Division, American Cyanamid Company, Pearl River, N. Y.

7. The evaluation of the activity of selected antibiotics against *Leptospira pomona* in chick embryos. T. F. McNamara, Agricultural Division, American Cyanamid Company, Pearl River, N. Y.

8. Perimycin: A new antifungal antibiotic. Wilfred E. Woolridge, School of Medicine, Oklahoma University, Oklahoma City.

9. Effect of prior inoculations with mycobacterial antigens on the course of experimental leishmaniasis in mice. Frans C. Goble, Edward A. Konopka and James L. Boyd, Research Dept. CIBA Pharmaceutical Products, Inc., Summit, N. J.

10. A method of testing staphylococcal antigens for their ability to produce protective immunity in mice. Josef Hoffman, Douglas J. Hennessy and Aaron D. Spielman, Research Division, Hoffmann Laboratories, Inc., Patterson, N. J.

11. Collocalia mucoid as substrate for myxovirus sialidase. Lucille T. Lee and Calderon Howe, Columbia University, College of Physicians and Surgeons, New York, N. Y.

12. A study of the effects of related benzyl pyrimidines *in vitro*. A. T. Iannotti, Wellcome Research Laboratories, Tuckahoe, N. Y.

13. Detection of *in vivo* synergism between some benzyl pyrimidines and sulfadiazine. T. A. Hermann, Wellcome Research Laboratories, Tuckahoe, N. Y.

14. Serine metabolism in *Streptococcus faecalis* and antimetabolite resistant mutants. Alva H. Johnson and Dorris J. Hutchison, Sloan-Kettering Division, Graduate School of Medical Sciences, Cornell University, New York, N. Y.

15. Pyrimidine metabolism of *Streptococcus faecalis:* Reversal studies on fluorinated pyrimidines. Alexander Bloch and Denise Martin, Sloan-Kettering Division, Graduate School of Medical Sciences, Cornell University, New York, N. Y.

16. The kinetics of the enzymatic formation of acetolactate by *Escherichia coli*. Richard Leavitt and H. Edwin Umbarger, Long Island Biological Association, Cold Spring Harbor, N. Y.

17. Bacteriocidal action of mitomycin C. Edward Reich and Aaron J. Shatkin, The Rockefeller Institute, New York, N. Y.

18. The growth of leptospira in defined media. Henry Vogel and Seymour H. Hutner, Bureau of Laboratories, New York City Department of Health and Haskins Laboratories, New York, N. Y.

19. Studies on the respiration of *Emericellopsis salmosynnemata*. I. Oxidation of carbohydrates by resting cells. Alan I. Fleischman and Michael A. Pisano, St. John's University, Jamaica, L. I., N. Y.

20. Yeast hemolysin in the brewing process. I. A. Parfentjev, Institute of Applied Biology, New York, N. Y.

Guest Speaker: Dr. Rene J. Dubos, The Rockefeller Institute, New York, N. Y. "Heredity, Environment and Disease".

North Carolina Branch
(Mary A. Poston, Secretary-Treasurer)

December 3, 1960. North Carolina State College, Raleigh.

1. Studies on the lipopolysaccharid-free cell-wall of *Chromobacterium violaceum*. Robert W. Wheat, Dept. of Biochemistry, Duke University Medical Center, Durham, N. C.

2. Virulence of *Pseudomonas solanacearum* as influenced by the proportion of virulent to avirulent cells. Charles W. Averre, III, and Arthur Kelman, Dept. of Plant Pathology, North Carolina State College, Raleigh.

3. More specific response to some highly purified tuberculo-proteins. Javad Vakilzadeh and H. Mac Vandiviere, Gravely Sanatorium, Chapel Hill, N. C.

4. A simple rapid method for the demonstration of fungi in clinical materials. Ernest W. Chick, Veterans Administration Hospital, Durham, N. C.

5. *In vitro* cytotoxicity of normal rabbit serum for Walker 256 tumor cells. Robert L. Tuttle and J. H. S. Foushee, Dept. of Microbiology and Pathology, Bowman Gray School of Medicine, Winston-Salem, N. C.

6. The long-chain fatty acids of certain biotin-requiring bacteria. Jo Ann Croom and J. J. McNeil, Dept. of Animal Industry, Botany and Bacteriology, North Carolina State College, Raleigh.

Guest Speaker: Dr. W. Wilbur Ackermann, Professor of Epidemiology, Dept. of Epidemiology, School of Public Health, University of Michigan, Ann Arbor. "Viral Development in a Mixed Infection."

Northeast Branch

(Alice T. Marston, Secretary-Treasurer)

November 19, 1960. Spaulding Life Science Building, University of New Hampshire, Durham, N. H.

1. Field studies with multivalent respiratory virus vaccines. T. G. Metcalf and J. J. Schmidt, Dept. of Bacteriology, University of New Hampshire, Durham, and Arctic Aeromedical Laboratory, Fairbanks, Alaska.

2. Studies on bovine staphylococcal mastitis. L. W. Slanetz, Clara H. Bartley, and F. E. Allen, Dept. of Bacteriology, University of New Hampshire, Durham.

3. Long term glycerol preservation of red cells. John Alexander Cavins Medical Corps, U.S.N.R., U. S. Naval Hospital, Chelsea, Massachusetts.

4. Characterization of the hydroxyl ion dependent release of amino acides from *Streptococcus faecium*. A. Isquith and W. R. Chesbro, Dept. of Bacteriology, University of New Hampshire, Durham.

Guest Speaker: Dr. Charles W. Fifield, Director of Biological Research, Millipore Filter Company, Bedford, Massachusetts. "Some Applications of the Millipore Filter in the Biological Sciences."

Ohio Branch

(Bernard A. Steinberg, Secretary-Treasurer)

November 12, 1960. Stillman Hall, Ohio State University, Columbus.

Symposium on Genetics

1. Morphogenetic studies on the pathogenic fungi. George H. Scherr, Consolidated Laboratories, Chicago Heights, Ill.

2. Infectious nucleic acids of viruses, Curt Bubel, University of Cincinnati, College of Medicine, Cincinnati, Ohio.

3. Deoxyribonucleic acid replication in bacteria. F. Forro and R. B. Painter, Battelle Memorial Institute, Columbus, Ohio.

4. Relationship between genes and antigen in the mouse. Carl Cohen, Battelle Memorial Institute, Columbus, Ohio.

Scientific Session

1. *In vitro* sensitivity of 25 strains of *Histoplasma capsulation* to amphotericin B-D. Artis Baum and G. L. Baum, Jewish Hospital, Cincinnati, Ohio.

2. Epidemiological study of *Flavobacterium meningosepticum* as a cause of meningitis in the newborn. H. Cabrera, Mt. Carmel Hospital, Columbus, Ohio.

3. Recovery of group III unclassified mycobacteria in an Ohio community. R. P. Fowler, Lorain County Health Department, Oberlin, Ohio.

4. Microbiological degradation of different classes of phenolic compounds. H. H. Tabak and C. W. Chambers, Microbiology Section, Robert A. Taft Sanitary Engineering Center, U.S.P.H.S., Cincinnati, Ohio.

5. A familial outbreak of salmonellosis from an unusual source. R. Angelotti, M. J. Foter and K. Lewis, Food Microbiology Section, Robert A. Taft Sanitary Engineering Center, U.S.P.H.S., Cincinnati, Ohio.

6. An autoradiographic study of an experimental infection in mice. P. Bonventre, University of Cincinnati, College of Medicine, Cincinnati, Ohio.

Eastern Pennsylvania Branch

(Elizabeth H. Fowler, Secretary-Treasurer)

October 25, 1960. Hospital of the University of Pennsylvania, Philadelphia.

1. A mechanism for resistance to purine analogs. G. P. Kalle and Joseph S. Gots, School of Medicine, University of Pennsylvania, Philadelphia.

2. Environment-induced changes in the ribonucleic acid of *E. coli*. Melvin Santer, David C. Teller and Willard Antrews, Dept. of Biology, Haverford College, Haverford, Pa.

3. The biochemistry and physiology of a microbial toxin. Sam J. Ajl, Albert Einstein Medical Center, Northern Division. Philadelphia, Pa.

November 22, 1960. Hospital of the University of Pennsylvania, Philadelphia.

1. Specific interference between Coxsackie viruses in a carrier culture. Richard L. Crowell, Dept. of Microbiology, Hahnemann Medical College Philadelphia.

2. The induction of immunological tolerance in adult animals. B. A. Rubin, Wyeth Laboratories, Radnor, Pa.

3. A basis for cell injury to adenoviruses. Harold S. Ginsberg, Dept. of Microbiology, University of Pennsylvania School of Medicine, Philadelphia.

January 24, 1961. Hospital of the University of Pennsylvania, Philadelphia.

1. Effects of ozone on *Escherichia coli*. Dwight B. McNair Scott and Eilene Lesher, School of Medicine, University of Pennsylvania, Philadelphia.

2. Effects of deuterium oxide on virus multiplication. Lionel A. Manson, Richard Carp and David Kritchevsky, Wistar Institute, Philadelphia, Penna.

3. Nutritional and environmental effects on DNA replication in bacteria. Daniel Billen, University of Texas, M.D. Anderson Hospital and Tumor Institute, Houston, Texas. (Present address, National Science Foundation, Washington, D. C.)

Puerto Rico Branch

(Maria A. Medina, Secretary-Treasurer)

December 18, 1960. Hotel La Concha, San Juan, P. R.

1. Hypersensitivity reactions caused by microorganisms. Jose Quintero Fossas.

Rio de Janeiro Branch

(Moyses A. Fuks, Secretary-Treasurer)

November 29, 1960. Auditorio do Sindicato dos Medicos, Rio de Janeiro, Brazil.

1. Systems of bacteriophages T_7 and partially resistant bacterial strains. Rudolf Louis Hausmann, Rio de Janeiro.

2. Aspects of endotrophic sporulation. Pio Cesar de Lobao Portellada, Rio de Janeiro.

3. Vaccinating property of Yoshida's ascitic sarcoma accompanied by spontaneous alteration of the sub-cutaneous transplantation capacity. Sylvio Thales Torres, Rio de Janeiro.

December 30, 1960. A joint meeting with the Rio de Janeiro section of the Sociedade Brasileira de Microbiologia at the Instituto de Leprologia, Rio de Janeiro.

1. Ultrastructure of *Escherichia coli* treated with Giemsa stain before OsO_4 fixation. Mario M. Sampaio and Niber Paz M. de Silva, Instituto Oswaldo Cruz, Rio de Janeiro.

2. Some aspects of the bacteriology of leprosy. Candido Silva, Rio de Janeiro.

South Central Branch

(John D. Schneidau, Jr., Secretary-Treasurer)

December 2 and 3, 1960. State Office Building, Civic Center, New Orleans, La.

1. Glucose dissimilation studies with two strains of *Mycoplasma laidlawii*. J. Castrejon-Diez, E. Fisher, Jr. and T. N. Fisher Dept. of Microbiology, Tulane University Medical School, New Orleans.

2. Complement fixing antibody studies of serum fractions in bovine anaplasmosis. Thomas E. Rogers and George T. Dimopoullos, Dept. of Veterinary Science, Louisiana University, Baton Rouge.

3. Chemical and physical alterations in the bovine erythrocyte in infections of *Anaplasma marginale*. George T. Dimopoullos and David M. Bedell, Dept. of Veterinary Science, Louisiana State University, Baton Rouge.

4. Purification and characterization of a growth stimulant for Bacillus. Richard W. Traxler and C. E. Lankford, University of Southwestern Louisiana, Lafayette, and University of Texas, Austin.

5. Studies on staphylococci. Kenneth Borchardt, Dept. of Microbiology, Tulane University, School of Medicine, New Orleans.

6. Investigation of the molecular basis of heat resistance of an inorganic pyrophosphatase from *Azotobacter agilis*. Emmet J. Johnson and Mary K. Johnson, Dept. of Microbiology, University of Mississippi Medical Center, Jackson.

7. Bacteriology of experimental intestinal strangulation obstruction. George H. Bornside and Isidore Cohn, Jr., Dept. of Surgery, Louisiana State University, School of Medicine, New Orleans.

8. Comparison of enterococci and coliform microorganisms in commercially produced pecan nutmeats. James B. Hyndmand, U. S. Food and Drug Administration, New Orleans.

9. Additional evidence of magnesium participation in brucellacidal activity. James Hyde, Varley Young, and Rene Bienvenu, Dept. of Bacteriology, Northwestern State College, Natchitoches, Louisiana.

10. Some data on fatty acid metabolism by molds. George T. Johnson, Dept. of Botany and Bacteriology, University of Arkansas, Fayetteville.

11. Observation on *Listeria monocytogenes*. Barry Wentz and C. S. McCleskey, Dept. of Bacteriology, Louisiana State University, Baton Rouge.

12. Starch synthesis by corynebacteria. E. B. Carrier and C. S. McCleskey, Dept. of Bacteriology, Louisiana State University, Baton Rouge.

13. The nucleic acid composition of fowlpox virus. Lanelle Gafford and Charles C. Randall, Dept. of Microbiology, University of Mississippi, School of Medicine, Jackson.

14. Isolation and methane oxidation by *Ps. methanica*. Doris Holmes and R. J. Strawinski, Louisiana State University, Baton Rouge.

15. Some studies on the oxidation of naphthalene by *Ps. aeruginosa*. Don Isenberg, Albert Knecht, Robert Klausmeier and R. J. Strawinski, Louisiana State University, Baton Rouge.

16. Beta hemolytic streptococcus Group B in relation to perinatal problems. Marion Hood, Charity Hospital, New Orleans.

17. Some factors influencing the yeast-lactobacillus interrelationship. Doyle J. Evans and Thomas E. Wilson, University Southwestern Louisiana, Lafayette.

18. The effect of some organic herbicides on nitrifying bacteria. Jerry V. Mayeux and Arthur R. Colmer, Dept. of Bacteriology, Louisiana State University, Baton Rouge.

Guest Speaker: Dr. John C. Buddingh, Chairman of the Department of Microbiology, School of Medicine, Louisiana State University, New Orleans. "Microbiological Experiences—Europe 1960."

Texas Branch

(E. O. Bennett, Secretary-Treasurer)

November 18, 19, 1960. Jack Tar Hotel, Galveston, Texas.

1. Preliminary studies on the pathogenesis of cereobacillus disease. Kenneth L. Burdon and Reuben D. Wende, Dept. of Microbiology, Baylor University College of Medicine, Houston.

2. Staphylococcus killing patterns for chick embryos. Sanders T. Lyles and Sonja West, Texas Christian University, Fort Worth.

3. A study of Freund and Freund-type adjuvants in the production of experimental allergic encephalomyelitis. W. J. Fahlberg, E. C. Alvord, C. M. Shaw and M. J. Kies, Baylor University College of Medicine, Houston, Texas, and Laboratory of Clinical Science, National Institute of Mental Health, Bethesda, Md.

4. Visualization of anaphylactic-type reactivity *in vitro* by time-lapse cinemicrography. C. D. Dukes and H. H. Fox, Baylor University College of Medicine, Houston.

5. Replication pattern of psittacosis virus in a tissue culture system. Yoh Tanami, Morris Pollard and T. J. Starr, University of Texas Medical Branch, Galveston.

6. Preparation of kidney cell cultures. Craig Wallis, Raymond T. Lewis and Joseph L. Melnick, Baylor University College of Medicine, Houston.

7. The survival of mammalian cells (strain HeLa) after single and franctionated doses of x-rays. Royce Z. Lockart, Jr., Dept. of Bacteriology, University ot Texas, Austin.

8. Temperature induced pigmentation in *Serratia marcescens*. Cora Lee Gott and Robert P. Williams, Dept. of Microbiology, Baylor University College of Medicine, Houston.

9. An improved medium for pyocyanine production by *Pseudomonas aerugenosa*. Walter Sellers, E. Staten Wynne and C. D. Graber, School of Aviation Medicine, Brooks Air Force Base, Texas.

10. Some properties of the microbial stimulatory factors in human urine. H. N. Futch, B. L. Hellmers and E. O. Bennett, Dept. of Biology, University of Houston, Houston.

11. Growth studies on the cotton root-rot fungus, *Phymatotrichum omnivorum:* III. Assay of growth-promoting substances. Ralph J. Hervey, Texas Agricultural Experiment Station, College Station.

12. Measurement of the absorption, distribution and elimination of chlortetracycline using *Bacillus cereus* var. *mycoides*. H. J. Eoff, R. E. Davies, T. M. Ferguson and J. R. Couch, Texas A and M College, College Station.

13. The effect of alcohols and organic solvents on the viability of gram-positive and gram-negative bacteria. Manuel A. Rodriguez, Universidad de Nuevo Leon, Departmento de Microbiologia, Monterrey, N. L., Mexico.

14. Microbiological effects of space radiation. I. Preliminary report. Irving Davis and Thomas L. Roberts, School of Aviation Medicine, Brooks Air Force Base, Texas.

15. Occurrence of Proteus in captive *Macaca mulatta*. Anna C. Garner, School of Aviation Medicine, Brooks Air Force Base, Texas.

16. Aerobacter-Shigella antagonism: survey of 264 *Macacca mulatta* and *in vitro* studies of isolates. Anna C. Garner and E. Staten Wynne, School of Aviation Medicine, Brooks Air Force Base, Texas.

17. Mouse protective antibody for *Pseudomonas aeruginosa* in burned and unburned patients' sera. C. D. Graber and Dan Cummings, USA Surgical Research Unit, Brooke Army Medical Center, Ft. Sam Houston, Texas.

18. A comparison of methods to eliminate nonspecific fluorescent antibody staining. Susan J. Allen and Paul Donaldson, Dept. of Microbiology, University of Texas Southwestern Medical School, Dallas.

19. Effect of vibration and temperature on the specific reactive capacity of antibody. Jimmie Lee Flume, School of Aviation Medicine, Brooks Air Force, Base, Texas.

20. An adherence antigen of *Vibrio cholerae*. G. L. Bales and C. E. Lankford, University of Texas, Austin.

21. Early and late therapy in experimental proteus pyelonephritis. Betty W. Hunter, Lona

Souda and Jay P. Sanford, University of Texas Southwestern Medical School, Dallas.

22. Oxidation of alkyl substituted cyclic hydrocarbons by a nocardia. J. B. Davis, Socony Mobil Oil Co., Inc., Dallas.

23. Studies on transport mechanisms in *Escherichia coli*. L. Packer and M. D. Perry, University of Texas Southwestern Medical School, Dallas.

24. Studies on the mechanisms of x-ray-induced mutation in bacteria. Tsuneo Kada, C. O. Doudney and F. L. Haas, University of Texas M.D. Anderson Hospital and Tumor Institute, Houston.

25. Azotobacter bacteriophage. M. W. Nimeck and O. Wyss, Dept. of Bacteriology, University of Texas, Austin.

26. Effect of medium composition on inhibition of staphylococcal phage. C. E. Dowell and Eugene D. Rosenblum, University of Texas Southwestern Medical School, Dallas.

27. *Anaplasma marginale*—a parasite of bovine erythrocytes. Fred C. Heck, Ted E. Franklin and John W. Huff, Agricultural and Mechanical College of Texas, College Station.

28. Microorganisms associated with mosquitoes. D. W. Micks, S. R. Julian and M. J. Ferguson, University of Texas Medical Branch, Galveston.

29. Action of oral fusiform bacilli on ascorbic acid. William A. Nolte and Maria Winterbotham, University of Texas Dental Branch, Houston.

I. M. Lewis Lecture: "Biodynamic Pathways in the Production of Chemicals Having Industrial Importance." The I. M. Lewis Lecturer, Dr. Boyd Woodruff, Director, Dept. of Microbiology, Merck, Sharp and Dohme Research Laboratories, Rahway, N. J.

Washington, D. C. Branch

(Elizabeth J. Oswald, Secretary-Treasurer)

November 28, 1960. Walter Reed Army Institute of Research, Washington, D. C.

Address: Dr. Charles R. Phillips, Chief, Physical Defense Division, United States Army Chemical Corps Biological Laboratories, Fort Detrick, Frederick, Md. "The Moon, Mars and Microorganisms."

January 24, 1961. Walter Reed Army Institute of Research, Washington, D. C.

1. Nitrate reduction and catalase formation by certain lactobacilli. M. Rogosa, National Institute of Dental Research, NIH, Bethesda, Md.

2. Non-specific resistance mechanisms in embryonated eggs. R. A. Finkelstein, Division of Communicable Disease and Immunology, Walter Reed Army Institute of Research, Washington, D. C.

BOOKS AND REVIEWS

New Books:

An Introduction to the Biology of Microorganisms, L. E. Hawker, A. H. Linton, B. F. Folkes and M. J. Carlile, Bristol, England: St. Martin's Press, 1960, 452 pp., $6.75.

Atlas of Medical Mycology, 2nd Edition, E. S. Sadler and A. L. McQuown, New Orleans, La.: Williams and Wilkins Co., 1960, 335 pp., $11.00.

Basic Concepts and Experiments in Microbiology, Delbert E. Schoenhard, East Lansing, Mich.: Burgess Publishing Co., 1961, 238 pp., $5.50.

Beloved Professor: Life and Times of William Dodge Frost, R. E. Frost, Glen Ellyn, Ill.: Vantage Press, 1961, 350 pp., $3.75.

Biologie des Eaux Souterraines Littorales et Continentales, C. E. Debouttéville, Paris, France: Hermann, 1960, 752 pp., 60 NF.

Comparative Biochemistry of Photoreactive Systems, Mary Belle Allen, Editor, Richmond, Calif.: Academic Press, 1960, 437 pp., $12.00.

A Dictionary of Scientific Terms, 7th Edition, I. F. Henderson and J. H. Kenneth: D. Van Nostrand Co., Inc., 595 pp., $12.50.

Milestones in Microbiology, Thomas Brock, Editor, Indianapolis, Ind.: Prentice-Hall, Inc., 1961, 275 pp., $3.95.

Pioneer Microbiologists of America, Paul F. Clark, Madison, Wis.: University of Wisconsin Press, 1961, 369, pp., $6.00.

Reviews:

Atlas of Bacterial Flagellation, Einar Leifson, Wheaton, Illinois: Academic Press, Inc., 1960, 171 pp., $7.00.

This book will stand as an authoritative reference for many years to come, because its author is *the* authority on flagellation in this country, if not in the world. It is therefore most fitting that he has put on record both his opinions on the nature and significance of bacterial flagellation and his very extensive collection of photographs of flagellated cells. Considerable effort was apparently made to collect species from as many as possible of the common genera and even some of the exotic genera of the Eubacteriales and to use a few representatives of higher bacteria of other orders. Fifty-six genera and more than 250 named species were studied. The author is to be particularly

commended for keeping and publishing the record of source, and in many cases even the strain numbers of the cultures. This will be of great help in future taxonomic use of the data. For example, the reference to a motile Nocardia sp., received from Dr. Örskov of Denmark, lends more credence to the report than if the culture were from an unknown source or person. At several points in the book the author expresses opinions on taxonomic points; for example, questioning the need for the genus Mycoplana with its 2 species, *M. bullata* and *M. dimorpha*, and suggesting in a tentative way ("could well fit") that they be moved to Pseudomonas and Achromobacter respectively. Such suggestions may be missed by taxonomists of the future, and, even if noted, may be unacceptable as publication because the moves are not definitely proposed, as required by the Rules of Nomenclature.

Considerable significance is attached to the arrangement of flagella on the cells. The peritrichous arrangement is more common than previously supposed and it is interesting that within a single genus, as presently defined, there may be species of different flagellar arrangement. There is a short, but strongly worded section on bacterial evolution with respect to flagellation. Like all statements on the course of evolution, there will be difference of opinion in this regard, but it is interesting to know Dr. Leifson's views.

The morphology of flagella is described as *normal* (helical with wave length and amplitude fairly characteristic for the species), *curly* (with very short wave length), and *coiled* (with irregular loose coiling, often with ends of the flagella bent back against the cell body). In certain cases, e.g. *Proteus mirabilis* a change of pH from alkaline to acid converts the flagella from normal to curly. In certain Salmonella species the curly variant appears to be genetically controlled. One strain of *S. typhimurium* possessed normal flagella but no motility and therefore its flagella were described as paralyzed.

There are a fair number of typographic and other errors, which detract but do not interfere with use of the book.

ELIZABETH MCCOY

Developments in Industrial Microbiology, Vol. 1, B. M. Miller, Editor, Rahway, N. J.: Plenum Press, 1960, 267 pp., $7.50.

D. M. Miller, Editor and Chairman of the Publication Committee of the Society of Industrial Microbiology announces this book as beginning an annual series, to be issued in the spirit in which the Society itself was founded a decade ago. The Presidential Address by C. L. Porter outlines those purposes and records in an interesting way some intimate details of the founding and expanding of the Society. Future members will cherish his address as an archive.

The book proper is surprisingly broad, but so is the field of industrial microbiology. Too often in the past industrial microbiology has been stereotyped in reviews as the fermentation industry, which it no longer is. Here it is given broad scope: Space age microbiology, under which are considered possible life on other planets and the use of gnotobiota to explore it, adaptation of microorganisms to radiation, algae in air purification for submarines and for space flight; self-sanitizing agents for fabrics; antitumor antibiotics (here a brief chapter on "Problems in detection . . ." by John Ehrlich is particularly noteworthy); hallucinogenic fungi (a chapter by Sam Stein graphically describing his own experiments on himself and selected patients); deterioration of proteins; deterioration of wood by lower fungi; fungal metabolism and fungicides; and lastly, variation in microorganisms, a general discussion of mutation in microorganisms, with two especially good chapters: "Modification of radiation effects in bacteria" by Max Zelle and "The mechanism of chemical mutagenesis with special reference to triethylene melamine action" by W. Szybalski.

Surely every microbiologist in the industrial field will find something of interest in this book and will be inclined to buy the series as it appears. With its timely coverage of industrial interests the series should be extremely useful. And that brings the writer to her only point of criticism. There is no index. Surely, if the books are to be of reference value, there should be indices in future volumes.

ELIZABETH MCCOY

NEW MEMBERS

1961 New Members—Regular

November 11, 1960 through February 18, 1961

Actor, Paul, Squibb Inst. for Med. Res., New Brunswick, N. J.

Ahearn, Donald G., 2818½ SW 38th Ave., Miami, Fla.

Albrecht, Alberta M., Institute of Microbiology, Rutgers, The State University, New Brunswick, N. J.

Alter, Burr McD., 328 Midland Avenue, St. Davids, Pa.

Amara, Anne, 4397 Grayton Road, Detroit 24, Mich.

Anderson, Kenneth J., Syracuse University, Department of Bacteriology & Botany, 208E Lyman Hall, Syracuse 10, N. Y.

Anderson, Ralph F., Northern Regional Research Laboratory, 1815 N. University, Peoria, Ill.

Anderson, Theodore E., 550 Lexington Ave., E. Lansing, Mich.

Andriole, Vincent T., National Institute of Allergy & Infectious Diseases, National Institutes of Health, Bethesda 14, Md.

Aragon, Lawrence, Box 805, Bagdad, Ariz.

Armes, Nancy J., 211 N. Ann St., Columbia, Mo.

Asukas, John J., Michigan State Univ., Dept. Microbiology, East Lansing, Mich.

Austin, Dennis D., Biol. Science Dept., Purdue University, West Lafayette, Ind.

Baarda, Isaac F., 822 Pammel Ct., Ames, Iowa

Bacon, Donald F., Institute of Microbiology, Rutgers—The State University, New Brunswick, N. J.

Bacon, William L., Meharry Med. College, Nashville 8, Tenn.

Bateman, Durward F., Department of Plant Pathology, Cornell University, Ithaca, N. Y.

Beberman, Stanley A., 106 Wood Hall, University of Connecticut, Storrs, Conn.

Belo, George, Gulf Research & Development Co., P.O. Box 2038, Pittsburgh 30, Pa.

Benoit, Robert E., 353 Prentiss Lane, Rutgers University, New Brunswick, N. J.

Beran, George W., Silliman University, Dumaguete City, Republic of Philippines

Berg, Robert B., Public Health Research Institute, Foot of East 15 Street, New York 9, N. Y.

Bergquist, Lois M., Los Angeles Valley College, 5800 Fulton Avenue, Van Nuys, Calif.

Berlin, Byron S., 1611 South Blvd., Ann Arbor, Mich.

Bernadette, Sister M. Rose, S.S.A., Anna Maria College, Paxton, Mass.

Bernett, Robert C., 2029 Harrison Avenue, Kansas City, Mo.

Bergeron, John A., Biology Dept., Brookhaven National Laboratory, Upton, L. I., N. Y.

Blobel, Hans G., Dept. of Veterinary Science, Univ. of Wis., Madison 6, Wis.

Bose, Subir K., Dept. of Botany, Washington University, St. Louis 30, Mo.

Boyer, Alvin C., Northern Regional Research Lab., 1815 N. University, Peoria, Ill.

Boyer, Gary H., RFD #3, Frederick, Md.

Bradshaw, Betsy R., 1600 Clifton Road, Atlanta 22, Ga.

Brezenski, Francis T., Department of Bacteriology, U. of Massachusetts, Amherst, Mass.

Brinkman, Richard E., 1592 Krylon Dr., Cincinnati 15, Ohio

Bryant, J. Forrest, Austin College, Sherman, Texas

Buecher, Edward J., Jr., Dept. of Bacteriology, Indiana University, Bloomington, Ind.

Burchall, James J., Dept. of Dairy Science, University of Illinois, Urbana, Ill.

Burger, Dieter, College of Veterinary Med., Washington State University, Pullman, Wash.

Byers, Edward J. Jr., State Hygienic Laboratory, Medical Laboratory Bldg., Iowa City, Iowa

Byrnes, Joseph M., 204A Carlson Terrace, Fayetteville, Ark.

Cabral, Concetta B., Biology Department, Adelphi College, Garden City, N. Y.

Calabresa, Jim V., 5624 W. Keefe Ave., Milwaukee 16, Wis.

Caldwell, Glyn G., 1306 Anthony, Apt. 7, Columbia, Mo.

Canatsey, George D., St. Elizabeth Hospital Laboratory, 1044 Belmont Avenue, Youngstown, Ohio

Chen, Peter K., 212 Bacteriology, University of Wisconsin, Madison 6, Wis.

Church, Alice B., Rockefeller Institute, 66th Street and York Avenue, New York 21, N. Y.

Clark, Alvin J., Dept. of Bacteriology, University of California, Berkeley 4, Calif.

Clausen, Carla R., 412 Artemos Drive, Missoula, Mont.

Coleman, Peggy D., S 46 Currier Hall, State University of Iowa, Iowa City, Iowa

Cook, Margaret M., Department of Epidemiology, School of Public Health, University of Michigan, Ann Arbor, Mich.

Coulston, Joan W., Apt. 305—660 Seward, Detroit 2, Mich.

Craig, Mary A., 610 University Avenue, Missoula, Mont.

Cross, John H., Jr., Department of Microbiology, University of Arkansas Medical Center, Little Rock, Ark.

Dacust, Donald R., Dept. of Bacteriology & Public Health, Marshall Hall, Univ. of Massachusetts, Amherst, Mass.

Dahiya, Raghunath Singh, Animal Industry Department, N. C. State College, Raleigh, N. C.

Damirgi, Salih Mahmood, 410 A. Pammel Ct., I.S.U., Ames, Iowa

Day, Lawrence E., Dept. of Microbiology, Michigan State University, East Lansing, Mich.

Day, William C., 504 Biggs Avenue, Frederick, Md.

Deigh, Rosalyn A., 11676 Chenault St., Los Angeles 49, Calif.

de la Torre, Jag C., 212 N. Oak Park Ave., Oak Park, Ill.

Del Giorno, Bette J., 785 Yale Avenue, Meriden, Conn.

Donahue, John A., 1185 King Avenue, Columbus, Ohio

Downey, Ronald J., Dept. of Bacteriology, University of Nebraska, Lincoln 8, Nebr.

Dean, Joseph Dufresne, Ecole de Medecine veterinaire, St. Hyacinthe, P.Q. Canada

Dye, William E., National Jewish Hospital, Denver 6, Colo.

Eddy, Brian P., Low Temperature Research Station, Downing Street, Cambridge, England

Eithymiou, Constantine C., Microbiology Dept., Univ. of Maryland, College Park, Md.

Eisen, Herman N., Washington University School of Medicine, 600 S. Kingshighway, St. Louis 10, Mo.

Eisenstadt, Jerome M., Biology Div., P. O. Box Y, Oak Ridge Nat'l. Labs., Oak Ridge, Tenn.

El-Bisi, Hamed M., Dept. of Food Technology, Univ. of Massachusetts, Amherst, Mass.

Fabisch, Phyllis H., Dept. of Health, Education & Welfare, Nat'l. Institutes of Health, Div. of Biologic Standards, Lab. of Immunology, Bethesda 14, Md.

Fauve, Robert M., The Rockefeller Institute, 66th Street and York Avenue, New York 21, N. Y.

Fay, Anthony F. J., 4106 160th Street, Flushing 58, N. Y.

Feldman, Lawrence A., Department of Bacteriology, Penn. State University, University Park, Pa.

Fell, Jack W., Department of Microbiology, School of Medicine, University of Miami, Coral Gables, Fla.

Field, Arthur K., 108 Lake Street, Ithaca, N. Y.

Firth, John M., Abbott Laboratories Ltd., PO Box 6150, Montreal, Que., Canada

Fisher, Leston K., Dept. of Biol. Sci., University of Cincinnati, Cincinnati 21, Ohio

Flagg, Walter B., 29 N. Hirst St., Phila. 39, Pa.

Frank, Michael E., 87 Ellwood Street, New York 40, N. Y.

Fraser, Dean, Bacteriology Dept., Indiana University, Bloomington, Ind.

Frea, James I., Dept. of Bacteriology, Univ. of Wisconsin, Madison 6, Wis.

Friedman, Stuart D., 82 North Prospect St., Amherst, Mass.

Fukazawa, Yoshimura, Dept. of Biology, Johns Hopkins University, Baltimore 18, Md.

Gabliks, Janis Z., Department of Bacteriology, Rutgers University, New Brunswick, N. J.

Gaudy, Elizabeth T., 335 Burrill Hall, Univ. of Illinois, Urbana, Ill.

Geib, Donna S., 1301–15th St. N.W., Apt. 806, Washington 5, D. C.

Getchell, R. Nash, 3123 Holyrood Drive, Oakland, Calif.

Gezon, Horace M., Grad. School of Public Health, 130 De Sota St., Pittsburgh 13, Pa.

Ghalambor, Mohammed Ali, Rackham Arthritis Research Unit, University of Michigan Medical Center, Ann Arbor, Mich.

Gibbs, Clarence Joseph, Jr., 326 E. St. N.E., Washington 2, D. C.

Gilmore, Jerry P., P. O. Box 430, Puccinelli Packing Co., Turlock, Calif.

Goldmintz, Daniel, 4–14 Lee St., Blacksburg, Va.

Gonzalez, Dolores, Nopaltzin No. 28, Golonia Tlaxpana, Mexico 15, D. F.

Goodman, Fred, Stern College—Yeshiva Univ., 253 Lexington Ave., New York 16, N. Y.

Goodman, Robert N., Dept. of Horticulture, University of Missouri, Columbia, Mo.

Gray, Raymond F., 3714 Washington Ave. St. Louis, Mo.

Green, Maurice, Saint Louis University School of Medicine, 1402 So. Grand Blvd., St. Louis, Mo.

Griffiths, Bertie B., 270 Home Economics Bldg., University of Wisconsin, Madison, Wis.

Grossman, Lawrence, Graduate Dept. of Biochemistry, Waltham, Mass.

Grunberg, Emanuel, Hoffmann-La Roche Inc., Roche Park, Nutley 10, N. J.

Grunwald, Frederick A., Research Laboratories, Mead Johnson & Co., Evansville 21, Ind.

Gunther, Cora B., Lansdale RD #2, Montg. Co., Pa.

Haesly, D. J., Dept. of Bacteriology, University of Texas, Austin, Texas

Halbert, Mary M., 1768 Field Ave., St. Paul 16, Minn.

Harrendorf, Cagle, 1622 Battery St., Little Rock, Ark.

Hebeka, Elias Khalil, Bacteriology Dept., Rutgers —The State University, New Brunswick, N. J.

Henderson, Peggie Mize, Memorial Medical Center, Williamson, W. Va.

Henney, Henry R., Jr., Dept. of Bacteriology, University of Arizona, Tucson, Ariz.

Henney, Mary R., Dept. of Bacteriology, University of Arizona, Tucson, Ariz.

Henshaw, Edgar C., Dept. Bacteriology, Harvard Medical School, Boston 15, Mass.

Herman, Alberta I., 1139 Pauline Ave., Madison 5, Wis.

Hicks, Harold R., MB Division, Army Biological Laboratories, Ft. Detrick, Frederick, Md.

Holdar, Mary A., Dept. of Animal Industry and Vet. Science, University of Arkansas, Fayetteville, Ark.

Horecker, Bernard L., Dept. of Microbiology, New York U. School of Medicine, 550 First Ave., New York 16, N. Y.

Hornbeck, Chester A., 6761 West M-78, Perry, Mich.

Hutchison, William F., Department of Preventive Medicine, University of Missippi Medical Center, 2500 North State Street, Jackson 6, Miss.

Igarashi, Richard T., Department of Microbiology, Univ. of Illinois, Urbana, Ill.

Ikari, Norman S., LGFAR, NIAID, National Institutes of Health, Bethesda 14, Md.

Ikeda, Yonosuke, Institute of Applied Microbiology, University of Tokyo, Mukogaoka, Bunkyo-ku, Tokyo, Japan

Inniss, William E., Department of Microbiology and Public Health, Michigan State University, East Lansing, Mich.

Jackel, Simon S., Vico Products Company, 2817 No. Oakley Ave., Chicago 18, Ill.

Jaye, Murray, 1010 South First St., Champaign, Ill.

Jensen, Marcus M., Div. of Virology, Dept. of Infectious Diseases, School of Med., Univ. of Calif., Los Angeles 24, Calif.

Johantges, Judy E., 939 E. 57th St., Chicago, Ill.

Johnson, Duane L., 2737 Blaisdale Ave., Minneapolis 8, Minn.

Johnston, Paul B., Jefferson Medical College, 1025 Walnut St., Philadelphia, Pa.

Jones, Lily A., Dept. Bacteriology, University of Minnesota, Minneapolis 14, Minn.

Kamber, Charles S., 720 W. 23rd Ave., Pine Bluff, Ark.

Kaneshiro, Tsuneo, Department of Bacteriology, University of California at Davis, Davis, Calif.

Keller, Anne, Dept. of Microbiology, Yale University, 310 Cedar St., New Haven, Conn.

Keynan, Alexander, Dept. of Bacteriology, College of Agriculture, University of Wisconsin, Madison 6, Wis.

Klein, George C., 5716 NW 65th Street, Oklahoma City 12, Okla.

Kness, Evelyn, 1915 Southern Blvd., Bronx 60, N. Y.

Kolodziej, Bruno J., 2226 N. Laramie Ave., Chicago 39, Ill.

Kraft, Allen A., Food Processing Laboratory, Iowa State University, Ames, Iowa

Kraidman, Gary, State University of New York, Medical College—Downstate Center, % Dept. of Microbiology, 450 Clarkson Ave., Brooklyn 3, N. Y.

Krause, Leonard M. 220 Roberts Circle, Norristown, Pa.

Krikszens, Arthur E., 2637 E. Fayette St., Syracuse 3, N. Y.

Kukla, Joseph F., Safety Div., Agent Control Br., Fort Detrick, Frederick, Md.

Laishley, Edward J., Dept. of Bacteriology, Macdonald College, Quebec, Canada

Lamberton, Alastair R. H., Brown Forman Dist. Corp., 18th and Howard St., Louisville, Ky.

Landy, Jerome J., 4301 W. Markham, Little Rock, Ark.

Latham, Melvin C., Methodists Evangelical Hospital, Louisville, Ky.

LeClair, Ronald A., 1907 Yale Avenue, S.W., Knoxville 16, Tenn.

Lee, Lucille T., Dep't. of Microbiology, Coll. of Phys. & Surg., Columbia Univ., 630 West 168 St., New York 32, N. Y.

Lees, Howard, Biochemistry Dept., University of Manitoba, Winnipeg, Manitoba, Canada

Lefkowitz, Harry, 1707 W. Seventh St., Frederick, Md.

Leitner, Felix, Dept. of Microbiology, Michael Reese Hospital, 29th St. and Ellis Ave., Chicago 16, Ill.

Le Minor, Leon L., Institut Pasteur, 28 Rue Du Docteur Roux, Paris 15, France

Leone, Donald E., 62 Cranberry Pond Rd., Norwich, Conn.

Lepper, Larry L., 1805 Wildwood Drive, Defiance, Ohio

Levine, Myron, Biology Dept., Brookhaven National Laboratory, Upton, Long Island, N. Y.

Liddel, Gerald U., Dept. of Bacteriology, Pennsylvania State Univ., University Park, Pa.

Liebhaber, Harvey, National Inst. Health Laboratory of Biology of Viruses, National Institute of Allergy and Infectious Diseases, Bethesda 14, Md.

Lighthart, Bruce, 6284 Acorn St., San Diego 15, Calif.

Lin, Edmund C. C., Department of Biological Chemistry, Harvard Medical School, 25 Shattuck Street, Boston 15, Mass.

Lindell, Shirley S., Bacteriology Dept., Kansas State University, Manhattan, Kans.

Liu, Oscar C., S. K. & F. Laboratories, 709 Swedeland Rd., Swedeland, Pa.

Lockard, Royce Z. Jr., Dept. of Microbiology, The University of Texas, Austin, Texas

McCullough, Lee B., 4655 Antioch Road, Kansas City 17, Mo.

McCurdy, Howard D., Essex College, Assumption University of Windsor, Windsor, Ontario, Canada

McFarland, Clarence R., State University of Iowa, Institute of Agricultural Medicine, Iowa City, Iowa

McNamara, Michael J., U. S. Naval Training Center, Naval Med. Red. Unit No. 4, GLKES N.T.C., Great Lakes, Ill.

Manson, Coila J., 2150 Rosewood Drive, Lakewood, Colo.

Margard, Werner L., Battelle Memorial Institute, 505 King Avenue, Columbus 1, Ohio

Marshall, Robert S., 422 Beech St., Lansing, Mich.

Marucci, Americo Alvin, Upstate Medical School, State Univ. of N. Y., 766 Irving Ave., Syracuse, N. Y.

Marzen, Marilyn N., 7503 Chestnut Ave., Hammond, Ind.

Mascoli, Carmine C., Dept. of Microbiology, West Virginia University, Medical Center, Morgantown, W. Va.

Mateles, Richard I., Dept. of Nutrition, Food Science and Technology, M. I. T., Cambridge 39, Mass.

Maxcy, R. Burt, 235 Carolyn Court, Lincoln 10, Nebr.

Mercer, Walter A., 1950 Sixth Street, Berkeley 10, Calif.

Meyer, Margaret E., Dept. of Microbiology, University of California, School of Vet. Med., Davis, Calif.

Middleton, George R., St. Josephs Hospital, Bacteriology Laboratory, Sarnia, Ontario, Canada

Miller, Herbert K., Gen. Med. Res., VA Hosp., 130 W. Kingsbridge Rd., Bronx 68, N. Y.

Montague, Tommy S., 1907 Yale Avenue, Knoxville 16, Tenn.

Morgan, Evelyn F., Hamburg Senior Central High School, Legion Drive, Hamburg, N. Y.

Morrison, Norman E., LWM Lab., Dept. of Pathobiology, Johns Hopkins Sch. of Hyg., Baltimore, Md.

Morter, Raymond L., Dept. of Veterinary Microbiology, Pathology & Public Health, Purdue University, W. Lafayette, Ind.

Murphy, John P., 2308 Longview, Austin 5, Texas

Myhr, Allan N., Dept. of Dairy Science, University of Saskatchewan, Saskatoon, Saskatchewan, Canada

Myoda, Toshio T., Dept. of Microbiology, School of Medicine, Western Reserve Univ., Cleveland, Ohio

Neal, Charles E., 7208 Jersey Avenue North, Minneapolis 27, Minn.

Nishimura, Robert H., 1133 Oregon Ave., Palo Alto, Calif.

North, James A., Star Route, Heber, Utah

Ohlsson, John A., Wyandotte Chemicals Corp., J. B. Ford Res. Dept., Wyandotte, Mich.

Orlando, Michael D., Grove Hill, RFD 5, Frederick, Md.

Ottolenghi, Absamo C., Sidney Hillman Medical Center, 2116 Chestnut Street, Philadelphia 3, Pa.

Owades, Joseph L., Liebmann Breweries, 36 Forrest St., Brooklyn 6, N. Y.

Parran, John J., 1155 Meredith Dr., Cincinnati 31, Ohio

Parzick, Arline B., 30 Wright Road, Rocky Hill, Conn.

Patel, Virendra, Dept. of Microbiology, School of Medicine, Univ. of Missouri, Columbia, Mo.

Peloquin, William H., % Mrs. K. Feldman, 250 Senator Place, Cincinnati 20, Ohio

Perkins, William E., 152 Los Altos Ave., Walnut Creek, Calif.

Perry, Dennis, Northwestern Univ. Med. School, Dept. of Microbiology, Chicago, Ill.

Pold, Sirie, 11 E. 12th Avenue, Columbus 1, Ohio

Poole, George M., Lilly Research Laboratories Dept. M797, Eli Lilly & Co., Indianapolis 6, Ind.

Porter, John N., Lederle Laboratories, Pearl River, N. Y.

Prager, Jan Clement, 1991 Sedgwick Ave., Bronx 53, N. Y.

Probstmeyer, Fern, Southern Illinois University, Microbiology Dept., Carbondale, Ill.

Proietto, Lillian J., Marymount College, Tarrytown, N. Y.

Provost, Philip J., Dept. of Microbiology, University of Maryland, College Park, Md.

Quader, Muhammad Abdul, PO Box 538, College Station, Texas

Quie, Paul G., Department of Pediatrics, University of Minnesota, Minneapolis 14, Minn.

Raizen, Eileen C., P. O. Box 2113, Norman, Okla.

Ralston, James R., 1114 W. Eicher, Springdale, Ark.

Rebers, Paul A., Inst. of Microbiology, Rutgers—The State Univ., New Brunswick, N. J.

Renshaw, Earl C., 1608 W. Washtenaw, Lansing, Mich.

Renwick, Galen A., Box 23B, Dockery-Folk Hall, South Residence Hall Group, Columbia, Mo.

Ribbons, Douglas W., Department of Biochemistry, The University, Glasgow W. 2, Scotland

Rickard, Beryl, Department of Bacteriology, Room 304, University of Wisconsin, Madison 6, Wis.

Rifkind, David, 10411 Montrose Ave., Bethesda 14, Md.

Ritchie, Donald D., Barnard College, 606 West 120th Street, New York 27, N. Y.

Roberts, Thomas L., 134 Drew Avenue, San Antonio 3, Texas

Rodgers, James A., 41 Taylor St., Dover, N. J.

Rolfes, Thomas J., Continental Baking Co., P.O. Box 631, Rye, N. Y.

Rosato, Robert R., R.F.D. #1, Storrs Rd., Mansfield Center, Conn.

Rosenthal, Marvin H., Cappel Laboratories, West Chester, Pa.

Rubin, Harry, Dept. of Virology, Univ. of Calif., Berkeley, Calif.

Ruiz-Herrera, Jose, Dept. of Agricultural Microbiology, College of Agriculture, Rutgers, The State University, New Brunswick, N. J.

Rupp, Frank A., Jr., 7 Ainslie Court, E. Brunswick, N. J.

Russ, John J., 2929 Satsuma Drive, Dallas 29, Texas

Sandberg, Russell L., 4301 W. Markham, Little Rock, Ark.

Saunders, George W., Jr., Great Lakes Research Div., Institute of Science and Technology, The University of Michigan, Ann Arbor, Mich.

Schaeffer, Warren I., Rutgers University, P. O. Box 782, New Brunswick, N. J.

Scheidt, Thomas W., 12034 Coyne Street, Los Angeles 49, Calif.

Scher, William I., Jr., 314 Park Pl., Charlottesville, Va.

Schieble, Jack H., Dept. Epidemiology, School Public Health, U. of M., Ann Arbor, Mich.

Schneider, Edward M., 125 Kent Road, Valley Stream, N. Y.

Schoenenberger, Nicholas, % National Canner Association, 1950–6th St., Berkeley 10, Calif.

Schottland, Carolyn H., Box 2463, Vanderbilt University, Nashville, Tenn.

Scott, Thomas F. McNair, The Childrens Hospital of Phila., 1740 Bainbridge St., Phila. 46, Pa.

Senez, Jacques C., CRSIM, 66 rue St. Sebastien, Marseille (6), France

Shaffer, G. Raymond, % Becton-Dickenson Laboratories Corporation, Rutherford, N. J.

Sharp, John T., Henry Ford Hospital, Detroit 2, Mich.

Simms, Ernest S., Dept. of Microbiology, Washington Univ. Med. School, 4580 Scott Ave., St. Louis 10, Mo.

Simon, Edward H., Dept. of Biol., Purdue University, Lafayette, Ind.

Skarnes, Robert C., Dept. of Bacteriology, The Medical School, University of Minnesota, Minneapolis 14, Minn.

Slanga, Roger A., 301 College Ave., Columbia, Mo.

Smith, Clyde K., Dept. of Microbiology, Mich. State Univ., East Lansing, Mich.

Smith, Harold L., 217 Park Place, Ashtabula, Ohio

Smith, Melvin R., 1428 Saratoga Avenue, N.E., Washington 18, D. C.

Snell, Neva S., Western Regional Research Lab. Buchanan St., Albany, Calif.

Snyder, Irwin L., Strasburger & Siegel, Inc., 1403 Eutaw Place, Baltimore 17, Md.

Soli, Giorgio, 1340 Sierra Alto Way, Los Angeles 46, Calif.

Spotts, Charles R., Department of Microbiology, Univ. of Washington School of Medicine, Seattle 5, Wash.

Stahly, Donald P., 148 Clinton St., Columbus 2, Ohio

Starr, Robert N., 13320 Riverside Dr., Sherman Oaks, Calif.

Steinbach, Marianne L., 28 Ball Terrace, Maplewood, N. J.

Stern, Harold, 8 Colonial Rd., West Hempstead, N. Y.

Stieritz, Donald D., 641 Linden Avenue, Newport, Ky.

Strain, Bobbie, 1529 Farnell Ct., Apt. 1, Decatur, Ga.

Streets, Bernard W., Jr., Miles Laboratories, Inc., Elkhart, Ind.

Sweeney, Edward E., Antibiotic Lab., Rm. 322, Bldg. 114, VA Center, Wilshire & Sawtelle Blvds., Los Angeles 25, Calif.

Takebe, Hiraku, Department of Biology, The Johns Hopkins University, Baltimore 18, Md.

Tankersley, Robert W., Jr., Dept. of Microbiology Medical College of Virginia, Richmond 19, Va.

Taylor, Mary-Lowell B., P.O. Box Y, Biology Division, Oak Ridge, Tenn.

Thomas, John W., 2511½ Montrose Avenue Montrose, Calif.

Tokumaru, Tadasu, Department of Microbiology Dartmouth Medical School, Hanover, N. H.

Tsuji, Kiyoshi, National Canners Association 1950 Sixth Street, Berkeley 10, Calif.

Tucker, Lt. Col. Elon B., IV U.S. Army Medical Laboratory, Ft. Sam Houston, Texas

Twarog, Robert, 335 Burrill Hall, Dept. of Micro. University of Ill., Urbana, Ill.

Van Benschoten, Robert M., P.O. Box 283 Lake Peekskill, N. Y.

Vaughan, Richard W., 14091 Spartan Village E. Lansing, Mich.

Vilseck, Joseph R., Jr., Dept. of Microbiology Medical Center, West Virginia Univ., Morgantown, W. Va.

Vining, Leo C., Prairie Regional Laboratory National Research Council of Canada, Saskatoon, Sask., Canada

Voelz, Herbert G. H., Dept. of Microbiology Medical Center, Indiana University, Indianapolis, Ind.

Walls, Nancy W., Engineering Experiment Station, Georgia Inst. of Technology, Atlanta 13, Ga.

Ward, John M., Dept. of Biology, Temple University, Phila. 22, Pa.

Ward, Martin E., Pabst Brewing Company 1910 W. Main St., Los Angeles 54, Calif.

Ward, Sarah J., 2534 Erie Avenue, Cincinnati 8, Ohio

Washington, William, Bronx Municipal Hospital (Jacobi), Pelham Parkway and Eastchester Road, Bronx 61, N. Y.

Watson, Ralph Wade, Division of Applied Biology National Research Council, Ottawa 2, Canada

Wegener, Warner S., Department of Biological Sciences, University of Cincinnati, Cincinnati 21, Ohio

Wegman, Judith, 1 South Street, New Haven 11, Conn.

Wentz, Barry A., 1130 Park Blvd., Baton Rouge 6, La.

Weston, Charles R., E. R. Squibb & Sons, George Rd., New Brunswick, N. J.

White, David C., Rockefeller Institute, New York 21, N. Y.

Whitfield, George B., Jr., Research Division The Upjohn Co., Kalamazoo, Mich.

Williams, Patric L., 2155 Seward Drive, Scotch Plains, N. J.

Woodard Warren, 314 S. Main St., Oxford, Ohio

Wright, George L., Department of Microbiology, Michigan State Univ., East Lansing, Mich.
Yamaguchi, Tatsuro, Dept. Bacteriology, Stocking Hall, Cornell U., Ithaca, N. Y.
Yamane, Isao, The Research Institute for Tuberculosis & Leprosy, Tohoku Univ., Kitayobancho, Sendai, Japan
Young, Terry B., 3709 Baring Street, Philadelphia 4, Pa.
Zajac, Ihor, 6423 Hasbrook Avenue, Philadelphia 11, Pa.
Zierdt, Charles H., Sr., 13405 Grenoble Drive, Wheaton Woods, Rockville, Md.

1961 New Members—Student

November 11, 1960 through February 18, 1961

Balanoff, Margaret A., 7222 Constance, Chicago 49, Ill.
Barrack, Jimmie D., 219 N. Church St., Apt. #2, Fayetteville, Ark.
Bartholomew, Dorothea, 7505 So. Normal, Chicago 20, Ill.
Beadles, Gloria J., 418 West 74th Street, Chicago 21, Ill.
Davie-Cothran, Darrei R., 4169 Berkeley Avenue, Chicago 53, Ill.
Egan, John B., 555 Jackson Street, Denver 6, Colo.
Hirschy, Robert A., Wheaton College, Wheaton, Ill.
Jones, Lofton, Jr., 4947 Michigan Avenue, Chicago 15, Ill.
Locniskar, Margaret, 5526 S. Mulligan Avenue, Chicago 38, Ill.
Lubaroff, David M., 6611 N. 18th St., Philadelphia 26, Pa.
McAninch, Mary A., 4114 E. 42nd St., Tulsa 35, Okla.
McCarthy, Doreen P., 820 Brant Drive, Wantagh, N. Y.
Micks, Mae M., 7730 So. Kostner, Chicago 52, Ill.
Morgan, Patricia G., 313 W. 51st Place, Chicago 9, Ill.
Mykytiuk, Thomas, 10353 So. Artesian, Chicago 43, Ill.
Patterson, Patricia E., 302 Greenwich, Hempstead, N. Y.
Perry, Susan, 234-16 134th Road, Laureiton 13, L. I., N. Y.
Phillips, Valerease C., 6607 So. Vernon Avenue, Chicago 37, Ill.
Raff, Martin Jay, 2420 Avenue Q, Apt. 12, Galveston, Texas
Reidl, Cora J., 7027 So. Emerald Avenue, Chicago 21, Ill.
Riles, Rene A., 7105 So. Stewart, Chicago 21, Ill.
Scalzo, Anthony M., 8259 So. Albany, Chicago 27, Ill.
Singer, Howard J., 333 Barrows Hall, Oberlin, Ohio
Skontos, Constance, 1413 W. Garfield Blvd., Chicago, Ill.
Smith, Barbara E., 4726 Langley Ave., Chicago 13, Ill.
Styrlander, Susan F., 15729 Winthrop, Detroit 27, Mich.
Taylor, Raymond L., 7257 Vernon Ave., Chicago 19, Ill.
Toy, Stephen T., Theta Chi Fraternity, Susquehanna University, Selinsgrove, Pa.
Waldbuesser, Katherine M., 71-27 Juno St., Forest Hills 75, L. I., N. Y.
Walsh, Martin Francis, Jr., 8009 So. May St., Chicago 20, Ill.

New Members—Sustaining

Cappel Laboratories, Div. of B-D Laboratories, Inc., R.D. #2, West Chester, Pa.
Hartman-Leddon Company, 60th and Woodland Avenue, Philadelphia 43, Pa.
Attention: Mr. Don R. Hartman

New Emeritus Members

Maslon, Morris, Dr. Thomas Hammond Foulds Memorial Laboratory of the Glens Falls Hospital, Glens Falls, N. Y.
Sherwood, Noble P., Dept. of Bacteriology, University of Kansas, Lawrence, Kans.

Deceased Members

Goldsworthy, Neil E., 118 Ryde Road, West Pymble, N S W Australia
Horoschak, Steven, 301 Comerford Terrace, Ridley Park, Pa.
Menkin, Valy, University of Kansas City, School of Dentistry, Kansas City 6, Mo.
Molnar, Julius, Molnar Laboratories, 211 East 19th St., New York 3, N. Y.
Stevens, Richard I., State Fish Hatchery, Rome, N. Y.
Strawzinski, R. J., 5955 Menlo Drive, Baton Rouge, La.
Syverton, Jerome T., 1060 Mayo Memorial, Univ. of Minnesota, Minneapolis, Minn.
Wolfe, Jack B., 16202 E. Fellowship Avenue Puente, Calif.

Looking for a Job?

For career opportunities in microbiology register with the

AMERICAN SOCIETY FOR MICROBIOLOGY
PLACEMENT COMMITTEE

For registration forms write to:

ASM PLACEMENT COMMITTEE
Attn.: Raymond W. Sarber
19875 Mack Avenue
Detroit 36, Michigan

Your applications will be available throughout the year to employers in search of all types of microbiologists. Small registration fee required.

NONSPECIFIC RESISTANCE TO INFECTION

Bacteriological Reviews Vol. 24, No. 1
Guest Editors: Colin M. MacLeod and Leighton E. Cluff

Proceedings of the Fort Detrick Symposium, September 16–17, 1959, Hood College, Frederick, Maryland, sponsored by the U. S. Army Chemical Corps and conducted under the auspices of the American Institute of Biological Sciences.

CONTENTS

Mobilization of Defensive Cells in Inflammatory Tissue
Fever as a Mechanism of Resistance
Influence of Irradiation on Resistance to Infection
Phagocytosis, with Particular Reference to Encapsulated Bacteria
Host Mechanisms Which Act to Remove Bacteria from the Blood Stream
Relation of Cell Metabolism to Infection with Bacterial and Rickettsial Agents
Antibacterial Systems of Serum
Host-Parasite Relationships in Patients with Dysproteinemias
Antimicrobial Factors in Tissues and Phagocytic Cells
Serum and Tissue Inhibitors of Virus
Viral Interference
Bacterial Interference
Hormones and Host Resistance to Infection
Nutritional Factors in Host Resistance
Genetic Effects in Nonspecific Resistance to Infectious Disease

Fifteen papers by authoritative American and British investigators; 208 pp., paper, 1960. Price, $2.00 postpaid U. S. A., $2.25 postpaid elsewhere, remittance with order.

AMERICAN SOCIETY FOR MICROBIOLOGY
OFFICE OF THE EXECUTIVE SECRETARY
19875 MACK AVENUE
DETROIT 36, MICHIGAN

The American Society for Microbiology

Welcomes to membership any person who is interested in its objects, and who holds a bachelor's degree or who has had training and experience equivalent to that represented by a bachelor's degree. The objects of the Society are "to promote scientific knowledge of bacteriology and related subjects through discussions, reports and publications, to stimulate scientific investigations and their applications, to plan, organize and administer projects for the advancement of knowledge in this field, and to improve professional qualifications."

Important in the accomplishment of these objectives are the Society's publications. These include (1) the monthly *Journal of Bacteriology* in which are found original communications on all branches of fundamental bacteriology and on the applications of bacteriology; (2) the quarterly *Bacteriological Reviews*, which contains review articles on subjects of current bacteriological interest; (3) the bi-monthly *Applied Microbiology*, which contains original papers on studies oriented toward the application of microbiological sciences to industry, foods, sanitation, agriculture and other areas involving the use or control of microorganisms; and (4) the quarterly *Bacteriological News*, which includes records of Society affairs, news and announcements, reviews of new books, reports from meetings of the Society's local branches, and anything else deemed to be of interest to bacteriologists.

The Society holds annual meetings where the latest results of research in all branches of bacteriology are presented, and where the members have exceptional opportunities to become acquainted and to discuss work in progress.

The Society operates a Placement Committee to help bacteriologists find employment; it maintains a collection of pictures, films and other materials useful in teaching bacteriology; and it performs numerous other services of value to bacteriologists.

Annual dues are $15.00, which includes subscriptions to *Bacteriological Reviews*, *Bacteriological News*, and a choice of either the *Journal of Bacteriology*, or *Applied Microbiology*. Members may receive all four publications on payment of $22.00.

Applicants for membership must be nominated in writing by two members of the Society. An applicant who has paid the first year's membership dues and has been endorsed by a majority of the Membership Committee and the Secretary shall be declared elected to membership in the Society.

Please use the following form to nominate candidates for membership.

Cut on dotted line and mail to A.S.M. Business Office 19875 Mack Ave., Detroit 36, Michigan

NOMINATION FOR MEMBERSHIP

(type or print)

NAME _____ DEGREES _____
(Last) (First) (Initial)

PROFESSIONAL EXPERIENCE AND POSITION _____

_____

ADDRESS IN FULL (to which publications should be sent) _____

_____

_____

* PROPOSED AND NOMINATED BY (1) _____

(2) _____

Annual dues are $15.00, which includes subscriptions to *Bacteriological Reviews*, *Bacteriological News* and a choice of the *Journal of Bacteriology* or *Applied Microbiology*. For an additional $7.00 (total of $22.00) you can receive all four publications. Indicate journal choice below and make remittance payable to the American Society for Microbiology and mail to A.S.M., 19875 Mack Ave., Detroit 36, Michigan. Enclosure of dues with application will avoid delays in receiving journals.

	*Check one***	*Remit*
Bacteriological Reviews and *Bacteriological News* plus		
Journal of Bacteriology	( )	$15.00
Applied Microbiology	( )	$15.00
Both *Journal of Bacteriology* and *Applied Microbiology*	( )	$22.00

Membership dues are initiated and renewed as of January 1 each year. Unless directions to the contrary are received, membership applications received prior to November 1 will be credited to the calendar year, and back issues of the publications for the calendar year will be furnished. Applications received after November 1 will become effective on the following January 1.

* *Members' signatures.*

** Journal choice must be indicated and is final for the current year.

V 21 2 APR 61 XUM

Standing Notices

BACTERIOLOGICAL NEWS DEADLINES

Production of *Bacteriological News* requires about two months. Therefore, material intended for publication in the next issues must reach the Executive Secretary's office by the following dates:

Deadlines

For April, 1961 issue—February 10, 1961
For August, 1961 issue—June 12, 1961
For November, 1961 issue—September 14, 1961
For January, 1962 issue—November 6, 1961

NOTICE

Please report change of address, non-delivery of journals, routine inquiries, and similar matters to:

American Society for Microbiology
Raymond W. Sarber, Exec. Sec'y
19875 Mack Avenue
Detroit 36, Michigan

CONFIRMED FUTURE MEETINGS

1961—Chicago, April 23–27
1962—Kansas City, May 6–10
1963—Cleveland, May 5–9
1964—Washington, May 3–7
1965—Atlantic City, April 25–29

IMPORTANT ADDRESSES

Program Committee

DR. MERRILL W. CHASE
The Rockefeller Institute
66th St. and York Ave.
New York 21, N. Y.

Chairman Local Committee, 1961 Meeting

J. C. MCCAFFREY
Illinois Dept. Public Health
1800 West Fillmore St.
Chicago 12, Ill.

Membership Committee

DR. DONALD E. SHAY
U. of Maryland
618 W. Lombard St.
Baltimore 1, Maryland

Committee on Materials for Visual Instruction

DR. HARRY E. MORTON
Dept. Microbiology
U. Pa. School of Medicine
Philadelphia 4, Pa.

Committee on President's Fellowships

DR. ARTHUR K. SAZ
National Institutes of Health
Building 5
Bethesda, Md.

Placement Committee

RAYMOND W. SARBER
19875 Mack Ave.
Detroit 36, Mich.

Plan now to attend the 61st Annual Meeting of

THE AMERICAN SOCIETY FOR MICROBIOLOGY

Morrison Hotel, Chicago, Illinois, *April 23–27, 1961*

BRING YOUR RECEIPTED MEMBERSHIP CARD FOR REGISTRATION

V
2
7
1
2

A
P
R

6
1

XUM